NICHIVO®

Vol.24

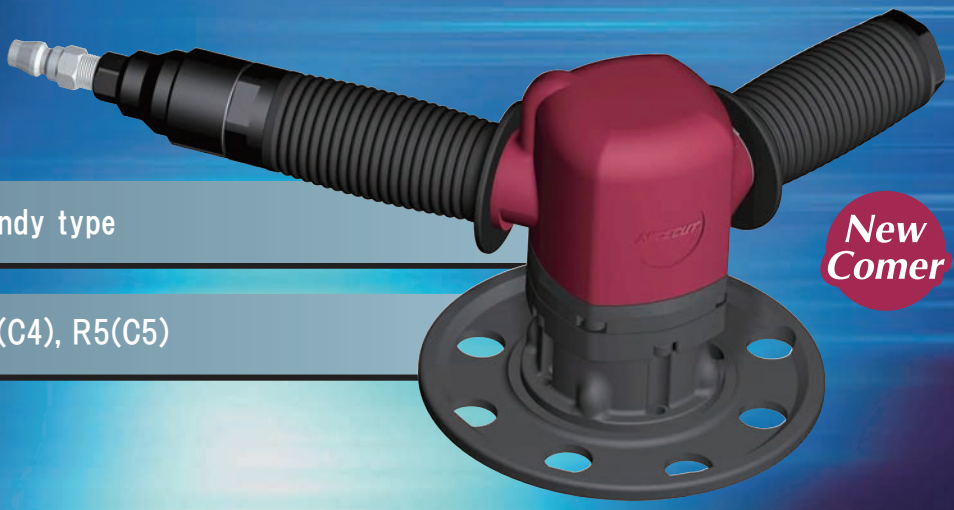
PRODUCTS GUIDE

FUJIGEN KOGYO CO.,LTD.

Handy Chamfering Machine

Han-Chan-man R-HYPER

High-Power !! Air operated Portable Handy Chamfering Machine



New Comer

1 Only 3.4kg weight Handy type

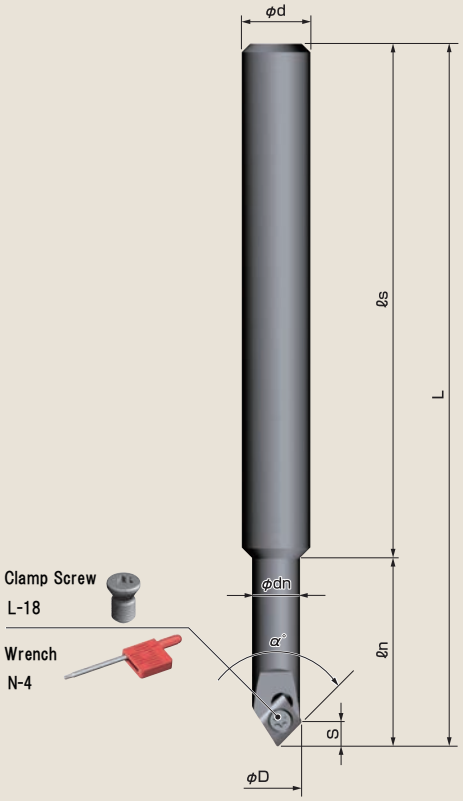
2 Capacity: R3(C3), R4(C4), R5(C5)

3Blade | R Chamfering | Chamfering

CONTENTS

Smallest Indexable Tools !

- Developed screw-on type smallest Insert (under-neck diameter φ6mm) This will be smallest insert in the existing market.
- Small diameter long neck prevents tool interference when processing in the deep area
- You can use this tool for engraving process

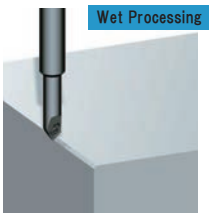


Processing Example

[Perimetery C2 Chamfering]

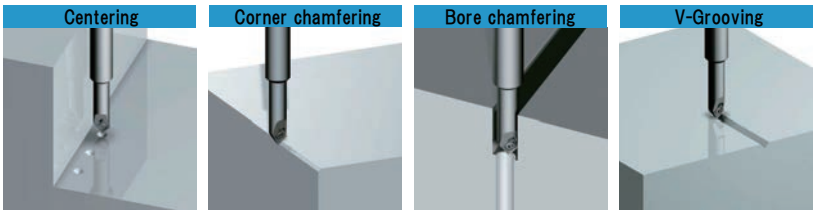
Body : SCN0845E
Insert : ENGX040102 AC15N

- Material・・・・・・・・・ SUS304
- Rotation Speed・・・ 5,000r.p.m.
- Feed (Z-axis) ・・・・ 350mm/min
- Cutting Depth・・・・・ C2
- Cutting Oil・・・・・・・ Yes



Result

Good!
No secondary burrs and No chattering after processing



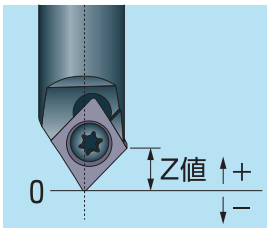
※ This tool cannot be used with drilling machines

Model.No.	Capacity Bore chamfering	α°
SCN0845E	φ0.6mm～φ6mm	90°
SCN0830E	φ0.6mm～φ7.4mm	120°

Body

Model.No.	blades	Dimensions (mm) φD	φd	φdn	L	ℓs	ℓn	S	α°
SCN0845E	1	6	8	5.6	82	60	22	2.8	90°
SCN0830E	1	7.4	8	7	82	60	22	2.0	120°

※ Insert is not equipped as standard accessory.Please purchase it separately
※ Clamp screw wrench we have standard equipment.



Z-value compensate standard

※ Please note that this value may be getting some errors

Momimen Nano → +0. 3

[Example]
Correct Z-value (-2.5)to -2.2 in case of φ5mm spot drilling process

Cutting Conditions

Centering

Material	Feed per blade (fz)	Rotation speed (r.p.m.)	Coolant
General Steel	0.02～0.03	4,000～	Yes
Alloy Steel	0.02～0.03	4,000～	Yes
Stainless Steel	0.01～0.02	4,000～	Yes
Aluminum,Resin,Brass	0.05～0.08	4,000～	Yes
Castings	0.04～0.06	4,000～	Yes

Chamfering

Material	Feed Per Blade (fz)	Rotation Speed (r.p.m.)	Coolant
General Steel	0.07～0.1	4,000～	Yes
Alloy Steel	0.07～0.1	4,000～	Yes
Stainless Steel	0.05～0.07	4,000～	Yes
Aluminum,Resin,Brass	0.1～0.15	4,000～	Yes
Castings	0.07～0.12	4,000～	Yes

V-groove processing

Material	Feed Per Blade (fz)	Rotation Speed (r.p.m.)	Coolant
General Steel	0.05～0.07	4,000～	Yes
Alloy Steel	0.05～0.07	4,000～	Yes
Stainless Steel	0.03～0.05	4,000～	Yes
Aluminum,Resin,Brass	0.05～0.08	4,000～	Yes
Castings	0.04～0.06	4,000～	Yes

- In case of bore chamfering process by Z-axis only,please take same cutting condition of centering process
- According to the shape of work, large or small chamfering amount and position of blade, the cutting condition will have to be adjusted . In case of processing with large amount chamfer,please take reducing cutting condition
- In case of chanfering process of Stainless Steel, please take the down cutting

Insert

Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
〈ENGX040102〉 R0.2 90° φ3.97 φ2.3 75° 3.9 (Except nose R) 1.588	ENGX040102 AC15N	Fine Particles Carbide	Honing Edge	AlCrN	2	12

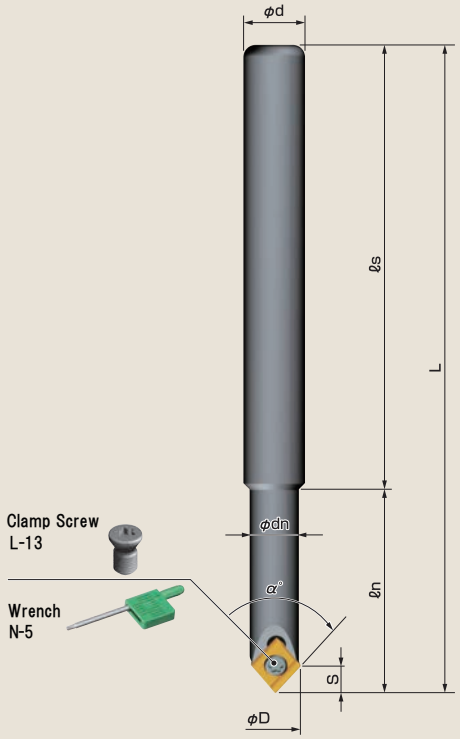
⚠ Blade edge by V-grooving and centering processing could not be a perfect vertex angle

Chibimomi

Centering | Bore chamfering Corner chamfering | Minimum Blade Diameter φ0.6mm | Maximum Blade Diameter φ9mm | 1Blade

This Tool !

- Center-drilling and chamfer process can be done by this Tool. You can reduce numbers of ATC tooling by using this tool and make high productivity!
- Original insert shape desined by us solved risk of Chattering and breakage



- Carbide made shank increased rigidity and limit of spotting has been much improved with the standard long shank, Protruding limit is now high.
- This tool have (φ10) Shank and (φ9) Blade, and can be used at narrow area also

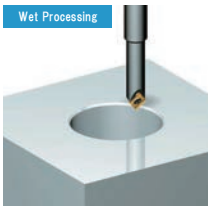
Processing Example

[φ100 Bore Chamfering]

- Body : SCM1045C
- Insert : C22GUX NK3030

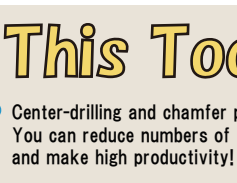
- Material·····SCr415
- Rotation Speed···2,200r.p.m
- Feed (Z-axis) ····150mm/min
- Cutting Depth····0.5mm
- Cutting Oil·····Yes

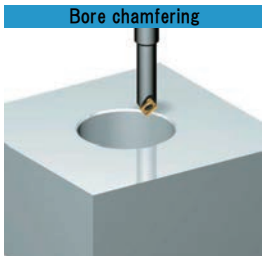
Wet Processing

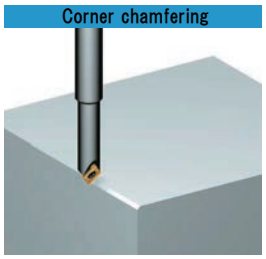


Result

Good!
800pcs process has successfully done without size change, secondary burrs and alternant sound during processing







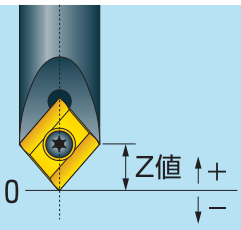
※ This tool cannot be used with drilling machines

Model. No.	Capacity	α°
	Bore chamfering	
SCM1045C	φ0.6mm～φ9mm	90°
SCM1045CL	φ0.6mm～φ9mm	90°
SCM1045CL-CB	φ0.6mm～φ9mm	90°

Body

Model. No.	Blades	Dimensions (mm)							α°	Carbide Shank
		φD	φd	φdn	L	ℓs	ℓn	S		
SCM1045C	1	9	10	8	105	72	33	4.4	90°	
SCM1045CL	1	9	10	8	165	132	33	4.4	90°	
SCM1045CL-CB	1	9	10	8	165	145	20	4.4	90°	●

※ Inset is not equipped as standard accessory. Please purchase it spearately.



Z-value compensate standard

※ Please note that this value may be getting little errors

Chibimomi → +0.2

[Example]
Correct Z-value(-4.0)to -3.8in case of
φ 8mm spot drilling process

Cutting Conditions

Centering

Material	Feed Per Blade (fz)	Rotation speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.05～0.08	2,000～3,500	C22GUX NK2020	Yes
Alloy Steel	0.05～0.08	2,000～3,500	C22GUX NK3030	Yes
Stainless Steel	0.05～0.08	2,000～3,500	C22GUX NK6060	Yes
Aluminum,Resin,Brass	0.05～0.1	3,000～	C22GUX NK1010	Yes
Castings	0.05～0.08	2,000～3,500	C22GUX NK3030	Yes

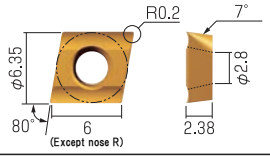
Chamfering

Material	Feed Per Blade (fz)	Rotation Speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.1～0.15	2,000～	C22GUX NK2020	Yes
Alloy Steel	0.1～0.15	2,000～	C22GUX NK3030	Yes
Stainless Steel	0.1～0.15	2,000～	C22GUX NK6060	Yes
Aluminum,Resin,Brass	0.1～0.15	3,000～	C22GUX NK1010	Yes
Castings	0.1～0.15	2,000～	C22GUX NK3030	Yes

- In case of bore chamfering prosess by Z-axis only,please take same cutting condition of centering process
- According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
  In case of process with large amount chamfer, please take reducing cutting condition
- In case of chamfering process of stainless steel,please take the down cutting

Insert

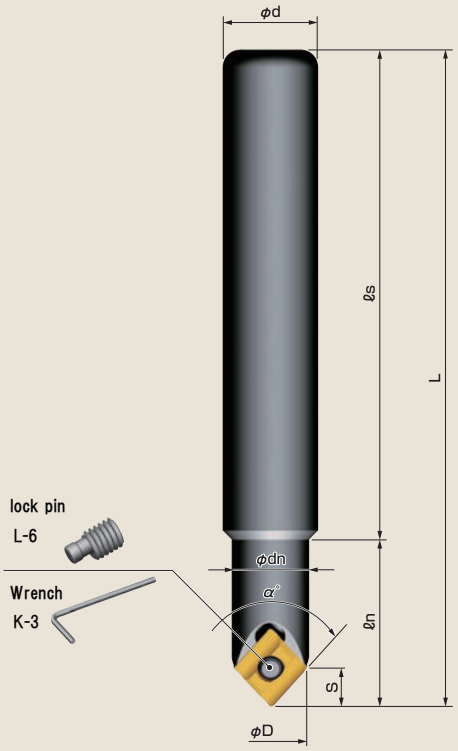
Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
〈C22GUX〉	C22GUX NK1010	Carbide K10	Sharp edge	None	2	12
	C22GUX NK2020	Carbide M20	Honing edge	None	2	12
	C22GUX NK3030	Carbide M20	Honing edge	TiN	2	12
	C22GUX NK5050	Carbide K10	Sharp edge	TiN	2	12
	C22GUX NK6060	Carbide M20	Honing edge	TiAℓN	2	12
	C22GUX NK8080	Carbide K10	Sharp edge	TiAℓN	2	12



⚠ Blade edge by V-grooving and centering processing could not be a perfect vertex angle

This Tool !

- Center-drilling and chamfer process can be done by this Tool. You can reduce numbers of ATC tooling by using this tool and make high productivity!
- Original insert shape desined by us solved risk of Chattering and breakage



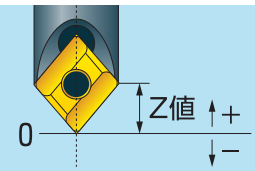
※ This tool cannot be used with drilling machines

Model. No.	Capacity	α°
	Bore chamfering	
SC1045C	φ2mm～φ13.5mm	90°
SC1245C	φ2mm～φ13.5mm	90°
SC1645C	φ2mm～φ13.5mm	90°
SC1645CL	φ2mm～φ13.5mm	90°
SC1630C	φ2mm～φ16.15mm	118°
SC1630CL	φ2mm～φ16.15mm	118°

Body

Model. No.	Blades	Dimensions (mm)							α°
		φD	φd	φdn	L	ℓs	ℓn	S	
SC1045C	1	13.5	10	13	110	82	28	6.3	90°
SC1245C	1	13.5	12	13	110	82	28	6.3	90°
SC1645C	1	13.5	16	13	110	82	28	6.3	90°
SC1645CL	1	13.5	16	13	200	172	28	6.3	90°
SC1630C	1	16.15	16	16.5	110	82	28	4.6	118°
SC1630CL	1	16.15	16	16.5	200	172	28	4.6	118°

※ Inset is not equipped as standard accessory. Please purchase it separately.
※ Lock Pin is supplied as standard accessory



Z-value compensate standard

※ Please note that this value may be getting little errors

Momimen → + 0.45

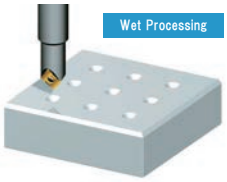
[Example]
Correct Z-value(-6.0)to -5.55in case of
φ12mm spot drilling process

Processing Example

[Φ8 of Centering Processing, Circumference C3 Chamfering]

- Body : SC1645C
- Insert : C32GUX NK3030

- Material·····S45C
- Rotation Speed···3,500r.p.m
- Feed (Z-axis)····100mm/min
- Feed (X-axis)····300mm
- Cutting Oil·····Yes



Result

Good!
No secondary burrs and no chattering process

Cutting Conditions

Centering

Material	Feed Per Blade (fz)	Rotation Speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.05～0.1	1,500～3,000	C32GUX NK2020	Yes
Alloy Steel	0.05～0.1	1,500～3,000	C32GUX NK3030	Yes
Stainless Steel	0.05～0.1	1,500～3,000	C32GUX AC15D	Yes
Aluminum,Resin,Brass	0.05～0.2	3,000～	C32GUX NK1010	Yes
Castings	0.05～0.1	1,500～3,000	C32GUX NK3030	Yes

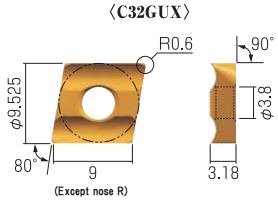
Chamfering

Material	Feed per blade (fz)	Rotation speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.1～0.2	2,000～	C32GUX NK2001	Yes
Alloy Steel	0.1～0.2	2,000～	C32GUX NK2001	Yes
Stainless Steel	0.1～0.2	2,000～	C32GUX AC15D	Yes
Aluminum,Resin,Brass	0.1～0.2	3,000～	C32GUX NK1010	Yes
Castings	0.1～0.2	2,000～	C32GUX NK2001	Yes

- In case of bore chamfering prosess by Z-axis only,please take same cutting condition of centering process
- According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
  In case of process with large amount chamfer, please take reducing cutting condition
- In case of chamfering process of stainless steel,please take the down cutting

Insert

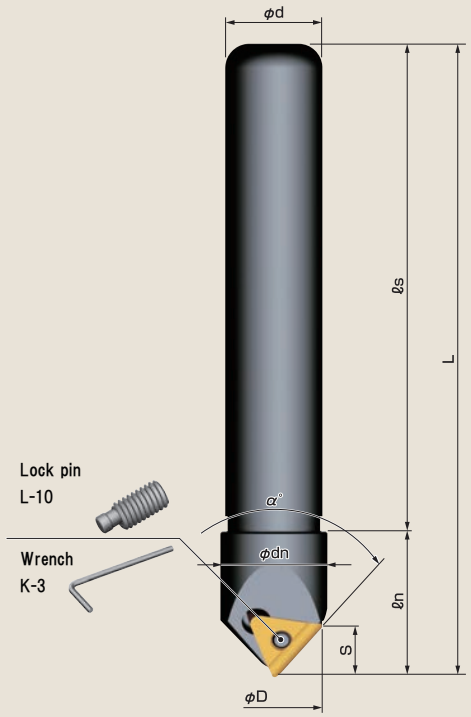
Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
〈C32GUX〉	C32GUX NK2001	Cermet	Honing edge	None	2	12
	C32GUX NK1010	Carbide K10	Sharp edge	None	2	12
	C32GUX NK2020	Carbide M20	Honing edge	None	2	12
	C32GUX NK3030	Carbide M20	Honing edge	TiN	2	12
	C32GUX NK5050	Carbide K10	Sharp edge	TiN	2	12
	C32GUX NK6060	Carbide M20	Honing edge	TiAℓN	2	12
	C32GUX NK8080	Carbide K10	Sharp edge	TiAℓN	2	12
	C32GUX AC15D	Fine particles Carbide	Honing edge	AlCrN	2	12
	NEW C32GUX AC25D	Fine particles Carbide	Sharp edge	AlCrN	2	12
	C32GUX HSS	HSS	Sharp edge	None	2	12
	C32GUX HSS TiN	HSS	Sharp edge	TiN	2	12



Blade edge by centering processing could not be a perfect vertex angle
When mounting insert, please do not take reverse tightening.
Due to the eccentricity looking mechanism ,poor accuracy or breakage of insert may be occurred
When replacing insert, please confirm twhether you have been taking reserve tightening or not.

This Tool !

- Center-drilling and chamfer process can be done by this Tool. You can reduce numbers of ATC tooling by using this tool and make high productivity!
- Original insert shape desined by us solved risk of Chattering and breakage



Achieved large Capacity Cutting of Center-Drilling(22.5mm) and C-Face Chamfering(C8mm).

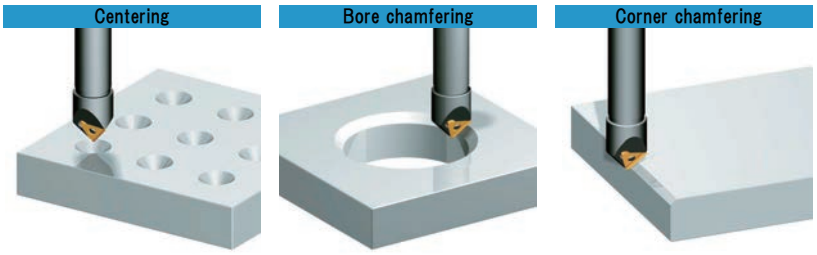
Processing Example

[Φ20 of Centering Processing]

- Body : SC2045T
- Insert : T32GUX NK3030
- Material·····S50C
- Rotation Speed···2,500r.p.m
- Feed (Z-axis)····80mm/min
- Cutting Oil·····Yes

Result

Good!
No secondary burrs and no chattering process



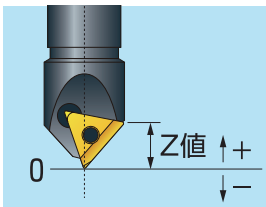
※ This tool cannot be used with drilling machines

Model. No.	Capacity Bore chamfering	α°
SC2045T	φ3mm～φ22.5mm	90°
SC2045TL	φ3mm～φ22.5mm	90°
SC2545TL	φ3mm～φ22.5mm	90°
SC2530T	φ3mm～φ26.6mm	120°
SC3230TL	φ3mm～φ26.6mm	120°

Body

Model. No.	Blades	Dimensions (mm) φD	φd	φdn	L	ℓs	ℓn	S	α°
SC2045T	1	22.5	20	22	130	100	30	10.5	90°
SC2045TL	1	22.5	20	22	200	170	30	10.5	90°
SC2545TL	1	22.5	25	22	200	150	50	10.5	90°
SC2530T	1	26.6	25	25	130	95	35	7.5	120°
SC3230TL	1	26.6	32	25	200	150	50	7.5	120°

※ Inset is not Included. Please Order Spearately.
※ Lock pin Wrench we have Standard Equipment.



Z-value compensate standard

※ Please note that this value may be getting little errors

Dekamomi → + 0.8

[Example]
Correct Z-value(-10.0)to -9.2in case of
φ20mm spot drilling process

Cuttinng Conditions

Centering

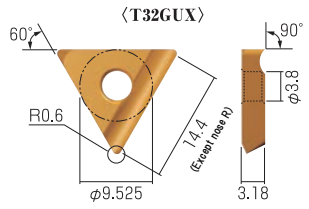
Material	Feed Per Blade (fz)	Rotation Speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.03～0.08	1,500～2,500	T32GUX NK2020	Yes
Alloy Steel	0.03～0.08	1,500～2,500	T32GUX NK3030	Yes
Stainless Steel	0.03～0.08	1,500～2,500	T32GUX NK6060	Yes
Aluminum,Resin,Brass	0.03～0.1	3,000～	T32GUX NK1010	Yes
Castings	0.03～0.08	1,500～2,500	T32GUX NK3030	Yes

Chamfering

Material	Feed Per Blade (fz)	Rotation Speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.1～0.2	1,500～	T32GUX NK2001	None
Alloy Steel	0.1～0.2	1,500～	T32GUX NK2001	None
Stainless Steel	0.1～0.2	1,500～	T32GUX NK6060	Yes
Aluminum,Resin,Brass	0.1～0.2	2,000～	T32GUX NK1010	Yes
Castings	0.1～0.2	1,500～	T32GUX NK2001	None

- In case of bore chamfering prosess by Z-axis only,please take same cutting condition of centering process
- According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
  In case of process with large amount chamfer, please take reducing cutting condition
- In case of chamfering process of stainless steel,please take the down cutting

Insert



Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
T32GUX NK2001	Cermet	Honing edge	None	2	12
T32GUX NK1010	Carbide K10	Sharp edge	None	2	12
T32GUX NK2020	Carbide M20	Honing edge	None	2	12
T32GUX NK3030	Carbide M20	Honing edge	TiN	2	12
T32GUX NK5050	Carbide K10	Sharp edge	TiN	2	12
T32GUX NK6060	Carbide M20	Honing edge	TiAℓN	2	12
T32GUX NK8080	Carbide K10	Sharp edge	TiAℓN	2	12
T32GUX HSS	HSS	Sharp edge	None	2	12
T32GUX HSS TiN	HSS	Sharp edge	TiN	2	12

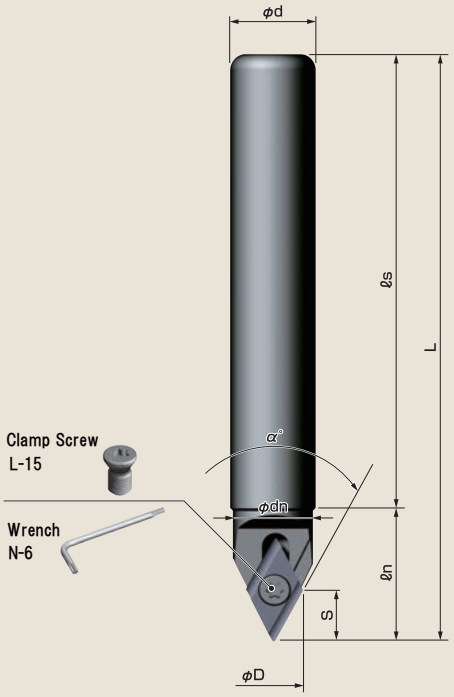
⚠ Blade edge by centering processing could not be a perfect vertex angle
When mounting insert, please do not take reverse tightening.
Due to the eccentricity looking mechanism ,poor accuracy or breakage of insert may be occurred
When replacing insert, please confirm twhether you have been taking reserve tightening or not.

60° Momimen

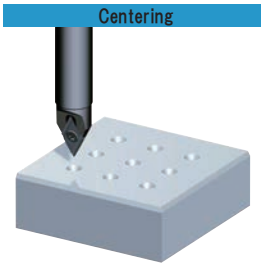
Centering | Bore chamfering Corner chamfering | Minimum Blade Diameter φ1.2mm | Maximum Blade Biameter φ11.88mm | 1Blade

This Tool !

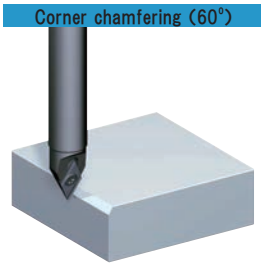
- Throw-away type tool ensured no alignment work
- Center-drilling and chamfer process can be done by tool.
  You can reduce numbers of ATC tooling, and ensured high speed cutting and high productivity.
- Slim body (shank:φ16mm and φ12mm blade)is suitable for work at narrow area

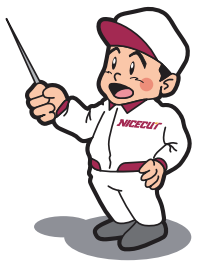


Centering



Corner chamfering (60°)





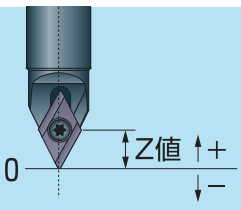
※ This tool cannot be used with drilling machines

Model. No.	Capacity Bore chamfering	α°
SC1660DS	φ1.2mm～φ11.88mm	60°

Body

Model. No.	Blades	Dimensions (mm) φD	φd	φdn	L	ℓs	ℓn	S	α°
SC1660DS	1	11.88	16	15	110	85	25	9.4	60°

※ Inset is not equipped as standard accessory. Please purchase it separately
※ LockPin is supplied as standard accessory



Z-value compensate standard

※ Please note that this value may be getting little errors

60° Momimen(SC1660DS) → +0. 82

[Example]
Correct Z-value (-8.66)to -7.84 in case of
φ10mm centering process

Cuttinng Conditions

Centering				
Material	Feed Per Blade (fz)	Rotation Speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.03～0.05	3,000～3,500	DCET11X304 AC15N	Yes
Alloy Steel	0.03～0.05	3,000～3,500	DCET11X304 AC15N	Yes
Stainless Steel	0.03～0.05	3,000～3,500	DCET11X304 AC15N	Yes
Aluminum,Resin,Brass	0.03～0.08	3,000～	DCET11X304 ZA10N	Yes
Castings	0.03～0.05	3,000～3,500	DCET11X304 AC15N	Yes

Chamfering				
Material	Feed Per Blade (fz)	Rotation Speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.1～0.15	2,000～	DCET11X304 AC15N	Yes
Alloy Steel	0.1～0.15	2,000～	DCET11X304 AC15N	Yes
Stainless Steel	0.1～0.15	2,000～	DCET11X304 AC15N	Yes
Aluminum,Resin,Brass	0.1～0.2	3,000～	DCET11X304 ZA10N	Yes
Castings	0.1～0.15	2,000～	DCET11X304 AC15N	Yes

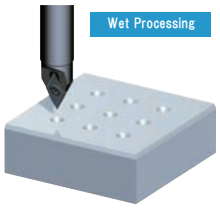
- In case of bore chamfering process by Z-axis only, please take same cutting condition of centering process
- According to the shape of work, large or small chamfering amount and position of blade, the cutting condition will have to be adjusted.
  In cace of process with large chanfer ,please take reducing cutting condition
- In cace of chamfering process of stainless steel, please take the down cutting

Processing Example

[Φ12 of Centering, Perimetery chamfering]

- Body : SC1660DS
- Insert : DCET11X304 AC15N

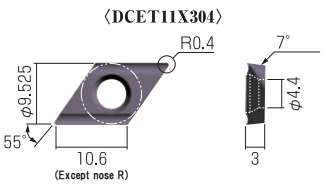
- Material·····S45C
- Rotation Speed···3,500r.p.m
- Feed (Z-axis) ····100mm/min
- Cutting Depth····300mm/min
- Cutting Oil·····Yes



Result

Good!
No secondary burrs and no chattering process

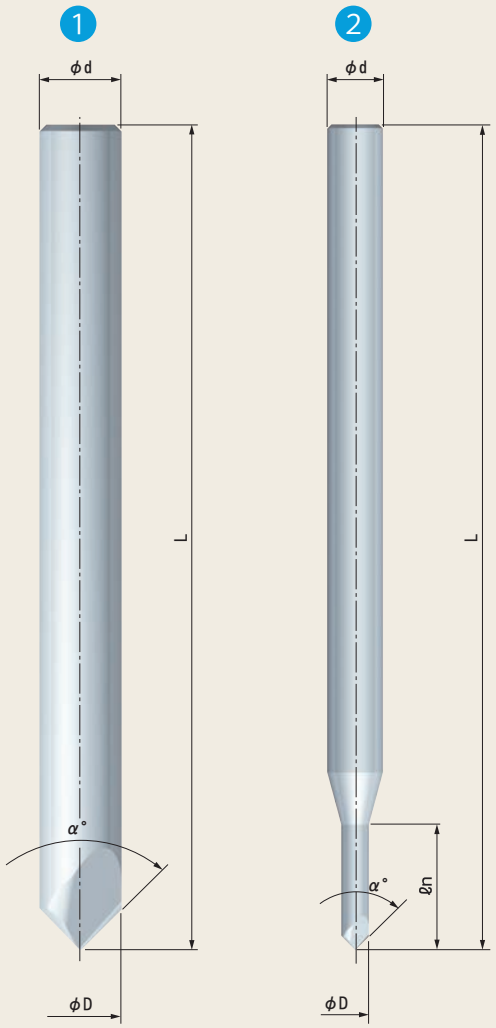
Insert

Figure	Model.No.	Material	Blade Shape	Coating	Usable Corner	Quantity per box
	DCET11X304 ZA10N	Fine Particles Carbide	Sharp Edge	None	2	12
	DCET11X304 AC15N	Fine Particles Carbide	Sharp Edge	AlCrN	2	12

⚠ Blade edge by V-grooving and centering processing could not be a perfect vertex angle

Micro Processing !

- Sharp edge design provides very fine Engraving
- Runout Accuracy is less than 0.005mm !
- φ0.01mm thread chamfering is possible
  (※ not for coating material)

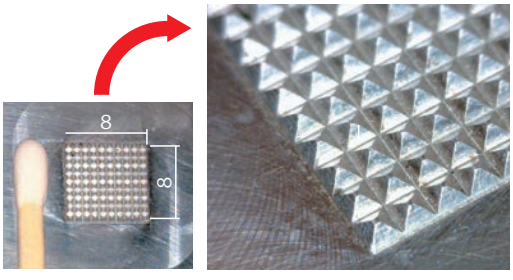


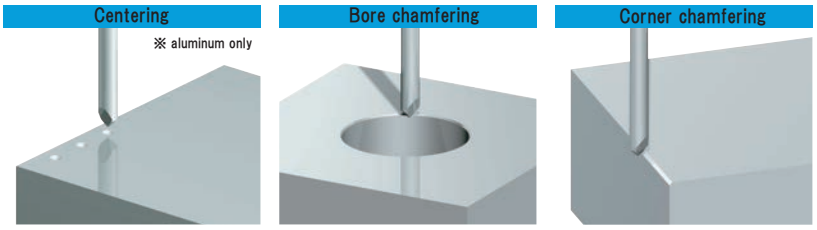
■Material : Fine Particles Carbide

Processing Example

[0.8mm height of the pyramid 100 processing]

- Body : PKP0645
- Material ····· A5052
- Rotation Speed ···· 10,000r.p.m.
- Table feed ····· 150/min
- Cutting Depth ····· Rough 0.185mm finish 0.03mm





※ This tool cannot be used with Drilling Machines

Model. No.	Capacity Bore chamfering	α°
PKP0145	φ0.01mm～φ1	90°
PKP0245	φ0.01mm～φ2	90°
PKP0345	φ0.01mm～φ3	90°
PKP0445	φ0.01mm～φ4	90°
PKP0545	φ0.01mm～φ5	90°
PKP0645	φ0.01mm～φ6	90°
PKP0145C	φ0.01mm～φ1	90°
PKP0245C	φ0.01mm～φ2	90°
PKP0345C	φ0.01mm～φ3	90°
PKP0445C	φ0.01mm～φ4	90°
PKP0545C	φ0.01mm～φ5	90°
PKP0645C	φ0.01mm～φ6	90°
PKP0145DLC	φ0.01mm～φ1	90°
PKP0245DLC	φ0.01mm～φ2	90°
PKP0345DLC	φ0.01mm～φ3	90°
PKP0445DLC	φ0.01mm～φ4	90°
PKP0545DLC	φ0.01mm～φ5	90°
PKP0645DLC	φ0.01mm～φ6	90°

■Body

Model. No.	Fig.	Blades	Dimensions(mm) Maximum Blade Diameter φD	φd	L	ℓn	α°	Coating
PKP0145	2	1	1	4	55	9	90°	None
PKP0245	2	1	2	4	55	9	90°	None
PKP0345	1	1	3	3	55	–	90°	None
PKP0445	1	1	4	4	55	–	90°	None
PKP0545	1	1	5	5	60	–	90°	None
PKP0645	1	1	6	6	60	–	90°	None
PKP0145C	2	1	1	4	55	9	90°	AlCrN
PKP0245C	2	1	2	4	55	9	90°	AlCrN
PKP0345C	1	1	3	3	55	–	90°	AlCrN
PKP0445C	1	1	4	4	55	–	90°	AlCrN
PKP0545C	1	1	5	5	60	–	90°	AlCrN
PKP0645C	1	1	6	6	60	–	90°	AlCrN
PKP0145DLC	2	1	1	4	55	9	90°	DLC
PKP0245DLC	2	1	2	4	55	9	90°	DLC
PKP0345DLC	1	1	3	3	55	–	90°	DLC
PKP0445DLC	1	1	4	4	55	–	90°	DLC
PKP0545DLC	1	1	5	5	60	–	90°	DLC
PKP0645DLC	1	1	6	6	60	–	90°	DLC

■Cuttinng Conditions

Centering

Material	Feed per blade (fz)	Rotation speed (r.p.m.)	Coolant
General Steel	×	×	×
Alloy Steel	×	×	×
Stainless Steel	×	×	×
Aluminum,Resin,Brass	0.05～0.08	10,000	YES
Cast Steel	×	×	×

V-groove processing

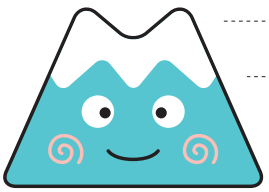
Material	Feed per blade (fz)	Rotation speed (r.p.m.)	Coolant
General Steel	0.05～0.07	8,000	YES
Alloy Steel	0.05～0.07	8,000	YES
Stainless Steel	0.03～0.05	8,000	YES
Aluminum,Resin,Brass	0.05～0.08	10,000	YES
Cast Steel	0.04～0.06	8,000	YES

Chamfering

Material	Feed per blade (fz)	Rotation speed (r.p.m.)	Coolant
General Steel	0.07～0.1	8,000	YES
Alloy Steel	0.07～0.1	8,000	YES
Stainless Steel	0.05～0.07	8,000	YES
Aluminum,Resin,Brass	0.1～0.15	10,000	YES
Cast Steel	0.07～0.12	8,000	YES

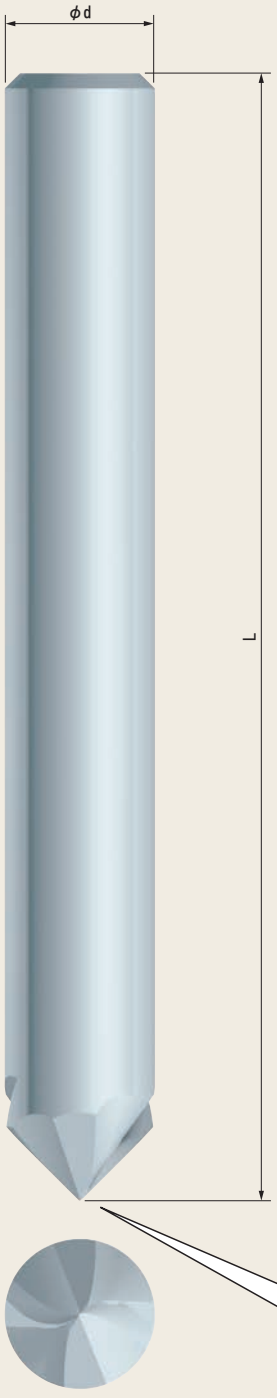
- For finish application, the cutting condition will have to be reduced
- Not possible for processing more than C1 chamfer processing
- According to the shape of work, large or small chamfering amount and position of blade, the cutting condition will have to be adjusted
- In case of chamfering process of stainless steel, reduce the cutting conditions

MEMO

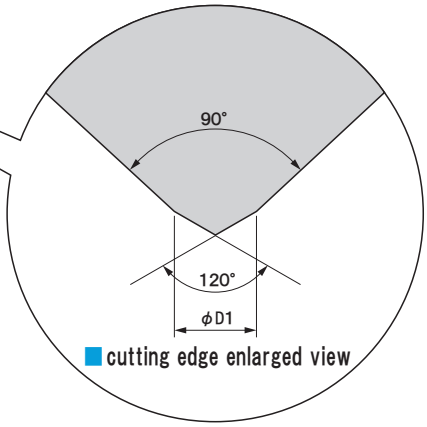


Exclusive for Aluminum processing !

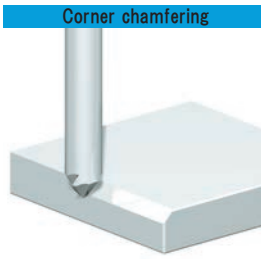
- Original shaped edge provide sharp cutting without deburring
- Running cost has magnificently reduced with High Strength and No resistance
- Runout Accuracy is less than 0.005mm !



■Material : Fine Particles Carbide



■cutting edge enlarged view



※ This tool cannot be used with Drilling Machines

Model. No.	Capacity
	Bore chamfering
AZ4-90-L60	φ0.01～φ4
AZ6-90-L75	φ0.01～φ6
AZ10-90-L75	φ0.01～φ10
AZ10-90-L120	φ0.01～φ10

■Body

Model. No.	Blades	Dimensions(mm)			
		Maximum Blade Diameter φD	φD1	φd	L
AZ4-90-L60	2	4	φ0.2	4	60
AZ6-90-L75	2	6	φ0.4	6	75
AZ10-90-L75	2	10	φ0.6	10	75
AZ10-90-L120	2	10	φ0.6	10	120

⚠ Can not regrinding !

■Cuttinng Conditions

Material	Processing type	Rotation speed (r.p.m.)	Table feed	Coolant
Aluminum,Resin,Brass	C chamfering	7,000～10,000	1,000～2,000	YES
	Sculpture, engraving	7,000～10,000	1,000～2,000	YES
	Centering Bore chamfering	6,000	80	YES

● take lower feed rate less than 800 in case of more than C1 process

■Processing Example

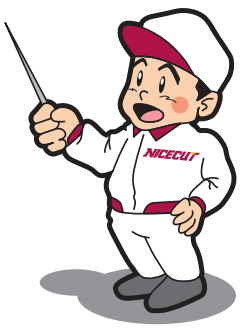
[Sculpturing, Engraving]

■Body : AZ10-90-L75

- Material····· A5000, A7000
- Rotation Speed ····· 8,000r.p.m.
- Feed Per Blade (fz)·· 0.15mm/tooth
- Table feed····· 2400mm/min
- Cutting Depth····· 0.15mm
- Coolant····· YES

Result

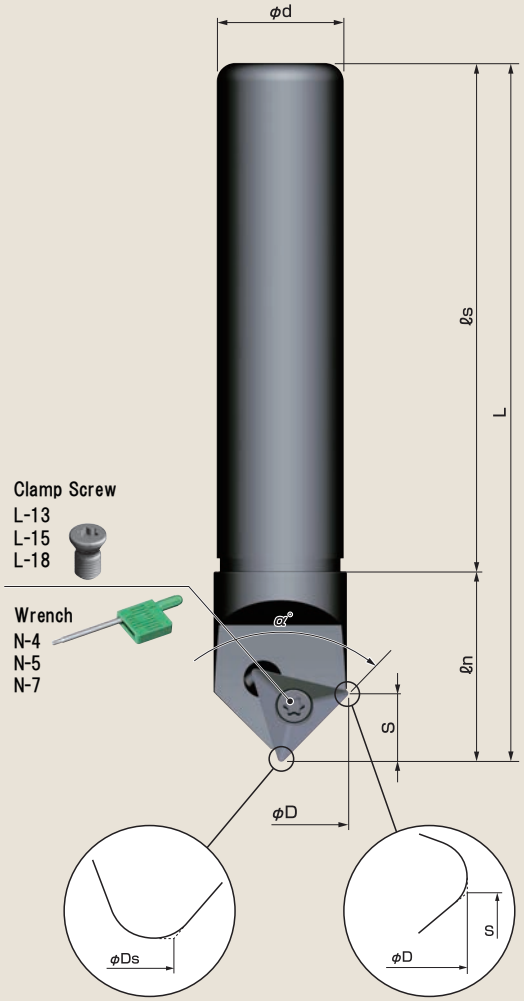
Good cutting, no deburring after processing



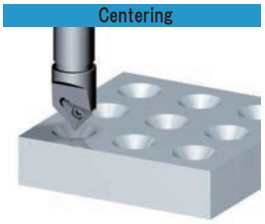
Chibieco / Momieco / Ecomen

Cost Reduction !

- Original insert have 3 usable corners and decrease the production cost widely
- Due to the improvement of blade shape and new coating, it is machinable more than any other insert, and chip(cuttings) release has been drastically improving
- Micro-grained Carbide with new coating made longer life of insert



Centering



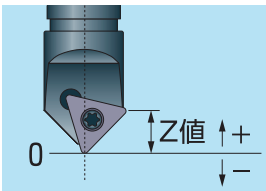
Bore chamfering

Corner chamfering

※ This tool cannot be used with drilling machines

Product Name	Model. No.	Capacity Bore chamfering	α°
Chibieco	EMS1045T	φ1.2mm～φ9.7mm	90°
	EMS1045TL	φ1.2mm～φ9.7mm	90°
	EMS1030T	φ1.0mm～φ11.7mm	120°
	EMS1030TL	φ1.0mm～φ11.7mm	120°
Momieco	EMM1245T	φ1.2mm～φ13.6mm	90°
	EMM1245TL	φ1.2mm～φ13.6mm	90°
	EMM1230T	φ1.0mm～φ16.5mm	120°
	EMM1230TL	φ1.0mm～φ16.5mm	120°
Ecomen	EML2045T	φ1.2mm～φ21.6mm	90°
	EML2045TL	φ1.2mm～φ21.6mm	90°
	EML2545TL	φ1.2mm～φ21.6mm	90°
	※ EML2045TH	φ1.2mm～φ21.6mm	90°
	EML2030T	φ1.0mm～φ26.0mm	120°
	EML2030TL	φ1.0mm～φ26.0mm	120°

※ with oil hole.



Z-value compensate standard

※ Please note that this value may be getting little errors

α°=90° → +0. 44 (Common to all models)
α°=120° → +0. 20 (Common to all models)
[Example]
Correct Z-value (-2.5)to -2.06 in case of 8mm centering process

Cutting Conditions

Centering

Material	Feed per blade (fz)	Rotation speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.02～0.08	2,000～	TXMT16T306 AC15N	Yes
Alloy Steel	0.02～0.08	2,000～	TXMT16T306 AC15N	Yes
Stainless Steel	0.01～0.05	2,000～	TXMT16T306 AC15N	Yes
Aluminum,Resin,Brass	0.02～0.08	5,000～	TXMT16T306 ZA10N	Yes
Castings	0.02～0.08	2,000～	TXMT16T306 AC15N	Yes

Chamfering

Material	Feed per blade (fz)	Rotation speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.03～0.15	3,000～	TXMT16T306 AC15N	None (※)
Alloy Steel	0.03～0.15	3,000～	TXMT16T306 AC15N	None (※)
Stainless Steel	0.03～0.15	3,000～	TXMT16T306 AC15N	Yes
Aluminum,Resin,Brass	0.03～0.15	5,000～	TXMT16T306 ZA10N	Yes
Castings	0.03～0.15	3,000～	TXMT16T306 AC15N	None (※)

※ Please used as needed.

- According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
  In case of process with large amount chamfer, please take reducing cutting condition
- In case of chamfering process of stainless steel,please take the down cutting

Body

Product name	Model. No.	blades	Dimensions (mm) φD	φDs	φd	L	ℓs	ℓn	S	α°	Inserts	Accessories Clamp Screw	Wrench
Chibieco	EMS1045T	1	10.3	0.88	10	95	80	15	4.7	90°	TXMT080206	L-18	N-4
	EMS1045TL	1	10.3	0.88	10	155	140	15	4.7	90°	TXMT080206	L-18	N-4
	EMS1030T	1	12.3	0.71	10	95	80	15	3.3	120°	TXMT080206	L-18	N-4
	EMS1030TL	1	12.3	0.71	10	155	140	15	3.3	120°	TXMT080206	L-18	N-4
Momieco	EMM1245T	1	14.2	0.88	12	100	80	20	6.7	90°	TXMT110306	L-13	N-5
	EMM1245TL	1	14.2	0.88	12	160	140	20	6.7	90°	TXMT110306	L-13	N-5
	EMM1230T	1	17.1	0.71	12	100	80	20	4.7	120°	TXMT110306	L-13	N-5
	EMM1230TL	1	17.1	0.71	12	160	140	20	4.7	120°	TXMT110306	L-13	N-5
Ecomen	EML2045T	1	22	0.88	20	110	80	30	10.5	90°	TXMT16T306	L-15	N-7
	EML2045TL	1	22	0.88	20	170	140	30	10.5	90°	TXMT16T306	L-15	N-7
	EML2545TL	1	22	0.88	25	170	140	30	10.5	90°	TXMT16T306	L-15	N-7
	EML2045TH	1	22	0.88	20	110	80	30	10.5	90°	TXMT16T306	L-15	N-7
	EML2030T	1	26.6	0.71	20	110	80	30	7.5	120°	TXMT16T306	L-15	N-7
	EML2030TL	1	26.6	0.71	20	170	140	30	7.5	120°	TXMT16T306	L-15	N-7

※ Insert is not equipped as standard accessory. Please purchase it separately ※ Clamp screw is equipped as standard accessory

⚠ Blade edge by V-grooving and centering processing could not be a perfect vertex angle

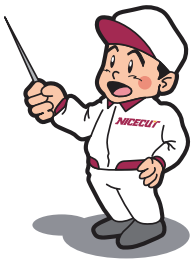
Processing Example

[Φ5mm Center-drilling]

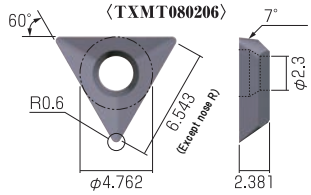
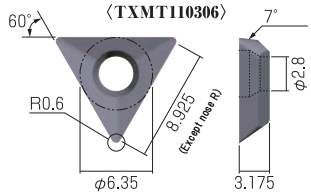
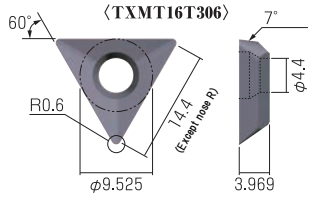
- Body : EML2045T
- Insert : TXMT16T306 AC15N
  - Material・・・・・・・・・ SUS304
  - Rotation Speed・・・ 2,000r.p.m
  - Feed (Z-axis) ・・・・ 40mm/min
  - Cutting Oil・・・・・・・ Yes

Result

No cutting vibration or secondary burr after centering



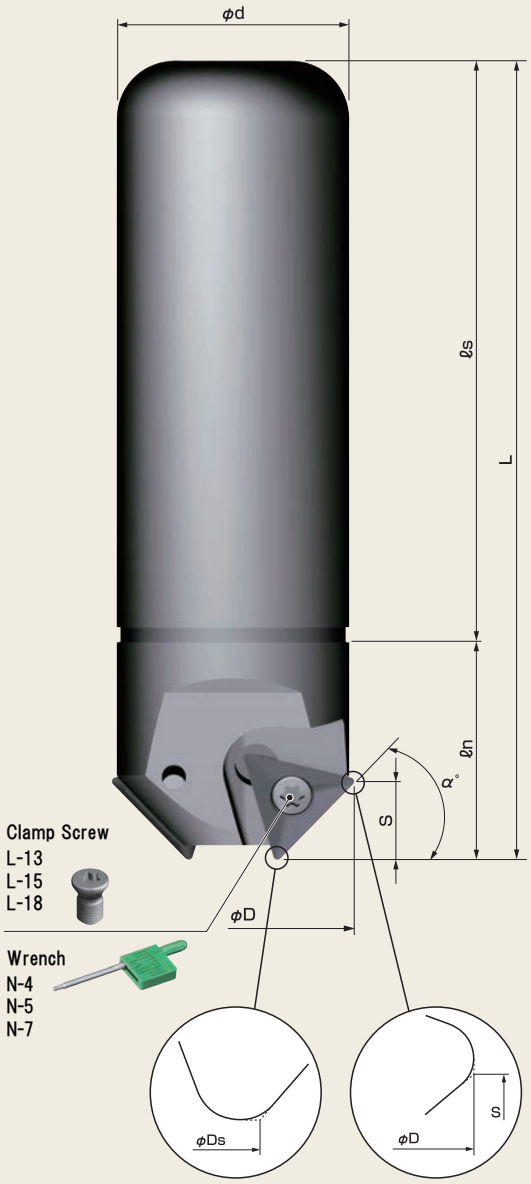
Insert

Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
● Chibieco 	TXMT080206 ZA10N	Carbide K10	Sharp edge	None	3	12
	TXMT080206 AC15N	Fine particles Carbide	Honing edge	AlCrN	3	12
● Momieco 	TXMT110306 ZA10N	Carbide K10	Sharp edge	None	3	12
	TXMT110306 AC15N	Fine particles Carbide	Honing edge	AlCrN	3	12
● Ecomen 	TXMT16T306 ZA10N	Carbide K10	Sharp edge	None	3	12
	TXMT16T306 AC15N	Fine particles Carbide	Honing edge	AlCrN	3	12

Chibieco2 / Momieco2 / Ecomen2

Cost Reduction !

- Original insert have 3 usable corners and decrease the production cost widely
- Due to the improvement of blade shape and new coating, it is machinable more than any other insert, and chip(cuttings) release has been drastically improving
- Micro-grained Carbide with new coating made longer life of insert



Corner chamfering

Bore chamfering

※ This tool cannot be used with drilling machines

Product Name	Model. No.	Capacity Bore chamfering	α°
Chibieco2	NKS3018T	φ7.3～φ18.0	30°
	NKS4516T	φ7.3～φ15.9	45°
	NKS6017T	φ11.3～φ17.1	60°
Momieco2	NKM3025T	φ9.3～φ24.7	30°
	NKM4522T	φ9.3～φ21.7	45°
	NKM6023T	φ14.3～φ22.8	60°
Ecomen2	NKL3036T	φ11.3～φ36.3	30°
	NKL4534T	φ13.4～φ33.8	45°
	NKL6034T	φ20.4～φ34.8	60°

Cutting Conditions

Chamfering				
Material	Feed per blade (fz)	Rotation speed (r.p.m.)	Recommended Insert	Coolant
General Steel	0.03～0.15	3,000～	TXMT16T306 AC15N	None(※)
Alloy Steel	0.03～0.15	3,000～	TXMT16T306 AC15N	None(※)
Stainless Steel	0.03～0.15	3,000～	TXMT16T306 AC15N	Yes
Aluminum,Resin,Brass	0.03～0.15	5,000～	TXMT16T306 ZA10N	Yes
Castings	0.03～0.15	3,000～	TXMT16T306 AC15N	None(※)

※ Please used as needed.
- According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
  In case of process with large amount chamfer, please take reducing cutting condition
- In case of chamfering process of stainless steel,please take the down cutting

Processing Example

[φ15 C5 Bore Chamfering]

- Body : NKL4534T
- Insert : TXMT16T306 AC15N

- Material·····SUS304
- Rotation Speed···4,500r.p.m.
- Feed (Z-axis) ····150/min
- Cutting Depth····C5
- Cutting Oil·····Yes

Result

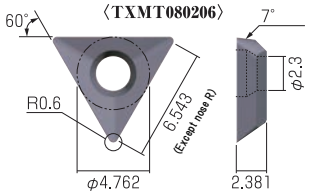
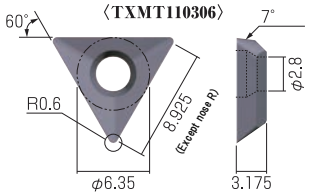
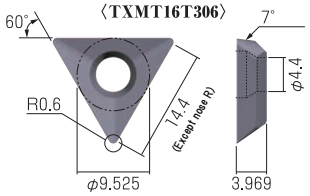
Good!
No secondary burrs and
No chattering after processing

Wet Processing

Body

Product name	Model. No.	blades	Dimensions (mm) φD	φDs	φd	L	ℓs	ℓn	S	α°	Inserts	Accessories Clamp Screw	Wrench
Chibieco2	NKS3018T	2	18.6	7	16	95	80	15	3.3	30°	TXMT080206	L-18	N-4
	NKS4516T	2	16.5	7	16	95	80	15	4.7	45°	TXMT080206	L-18	N-4
	NKS6017T	2	17.7	11	16	95	80	15	5.8	60°	TXMT080206	L-18	N-4
Momieco2	NKM3025T	2	25.3	9	20	100	80	20	4.7	30°	TXMT110306	L-13	N-5
	NKM4522T	2	22.3	9	20	100	80	20	6.7	45°	TXMT110306	L-13	N-5
	NKM6023T	2	23.4	14	20	100	80	20	8.2	60°	TXMT110306	L-13	N-5
Ecomen2	NKL3036T	2	36.9	11	32	110	80	30	7.5	30°	TXMT16T306	L-15	N-7
	NKL4534T	2	34.1	13	32	110	80	30	10.5	45°	TXMT16T306	L-15	N-7
	NKL6034T	2	34.9	20	32	110	80	30	12.9	60°	TXMT16T306	L-15	N-7

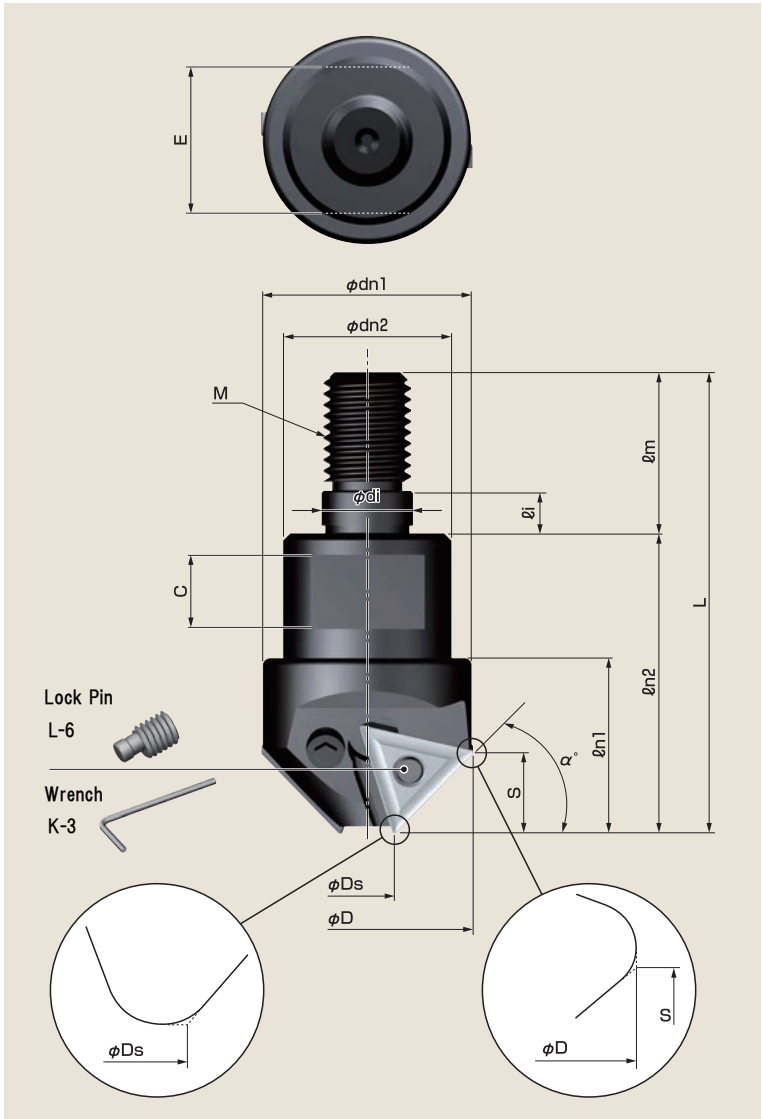
Insert

Figure	Model.No.	Material	Blade Shape	Coating	Usable Corner	Quantity per box
●Chibieco2 	TXMT080206 ZA10N	Carbide K10	Sharp edge	None	3	12
	TXMT080206 AC15N	Fine particles Carbide	Honing edge	AlCrN	3	12
●Momieco2 	TXMT110306 ZA10N	Carbide K10	Sharp edge	None	3	12
	TXMT110306 AC15N	Fine particles Carbide	Honing edge	AlCrN	3	12
●Ecomen2 	TXMT16T306 ZA10N	Carbide K10	Sharp edge	None	3	12
	TXMT16T306 AC15N	Fine particles Carbide	Honing edge	AlCrN	3	12

Chamfering Series

Chamfering Cutter

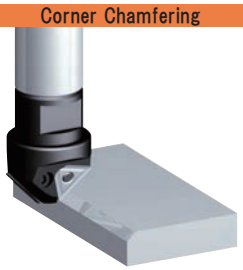
Applications use	Capacity												
	NK1536T-MD	NK2035T-MD	NK2535T-MD	NK3030T-MD	NK3532T-MD	NK4031T-MD	NK4530T-MD	NK5031T-MD	NK5532T-MD	NK6030T-MD	NK6533T-MD	NK7032T-MD	NK7533T-MD
α°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°
Bore chamfering	φ8~36mm	φ8~36mm	φ8~35mm	φ8~33mm	φ8~32mm	φ8~31mm	φ8~29mm	φ12~31mm	φ15~32mm	φ15~30mm	φ20~33mm	φ22~32mm	φ25~33mm



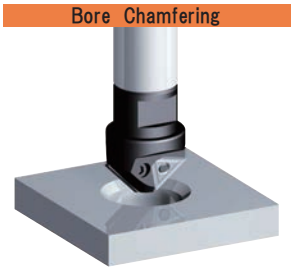
Modular Type!

- Angle 15° ~ 75° (by5° increments) Modular type cutter can be chosen according your application
- Insert available are rich and will meet with various applications you may need

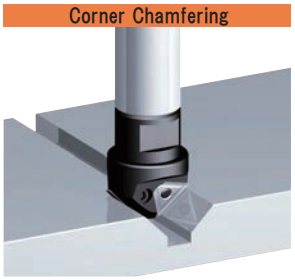
Corner Chamfering



Bore Chamfering



Corner Chamfering



Body

※ Please use Arbors to size and application, at local market

Model. No.	Blades	Dimensions (mm)													α°
		φD	Minimum cutting diameter φDs	φdn1	φdn2	φdi	M	L	ℓn1	ℓn2	ℓm	ℓi	S	C	E	
NEW NK1536T-MD	2	37.9	8	37.8	23	12.5	M12	63	24	41	22	5.5	4.0	10	17	15°
NEW NK2035T-MD	2	37.1	8	36.8	23	12.5	M12	63	24	41	22	5.5	5.3	10	17	20°
NEW NK2535T-MD	2	36.0	8	35.6	23	12.5	M12	63	24	41	22	5.5	6.5	10	17	25°
NEW NK3030T-MD	2	34.8	8	34.1	23	12.5	M12	63	24	41	22	5.5	7.7	10	17	30°
NEW NK3532T-MD	2	33.3	8	32.5	23	12.5	M12	63	24	41	22	5.5	8.9	10	17	35°
NEW NK4031T-MD	2	31.7	8	30.6	23	12.5	M12	63	24	41	22	5.5	9.9	10	17	40°
NEW NK4530T-MD	2	29.9	8	28.5	23	12.5	M12	63	24	41	22	5.5	10.9	10	17	45°
NEW NK5031T-MD	2	31.9	12	30.6	23	12.5	M12	63	24	41	22	5.5	11.8	10	17	50°
NEW NK5532T-MD	2	32.7	15	31.4	23	12.5	M12	63	24	41	22	5.5	12.7	10	17	55°
NEW NK6030T-MD	2	30.5	15	28.9	23	12.5	M12	63	24	41	22	5.5	13.4	10	17	60°
NEW NK6533T-MD	2	33.1	20	31.7	23	12.5	M12	63	24	41	22	5.5	14.0	10	17	65°
NEW NK7032T-MD	2	32.6	22	31.2	23	12.5	M12	63	24	41	22	5.5	14.5	10	17	70°
NEW NK7533T-MD	2	33.0	25	31.6	23	12.5	M12	63	24	41	22	5.5	15.0	10	17	75°

※ Inset is not equipped as standard accessory. Please purchase it separately.

※ Lock Pin is supplied as standard accessory

⚠ When mounting insert, please do not take reverse tightening.
Due to the eccentricity looking mechanism ,poor accuracy or breakage of insert may be occurred
When replacing insert, please confirm twhether you have been taking reserve tightening or not.

Processing Example

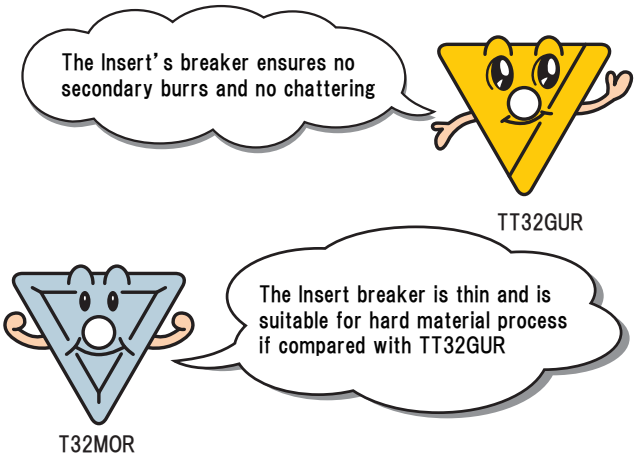
[C5 chamfering]

- Body : NK4530T-MD
- Insert : TT32GUR AC15N
  - Material・・・・・・・・SUS304
  - Rotation Speed・・2,000r.p.m
  - Table feed・・・・・・200/min
  - Cutting Depth・・・・C5
  - Cutting Oil・・・・・・None

Result

Good!
No secondary burrs and
No chattering after processing

※ Please use Arbors to size and application, at local market



Cutting Conditions

T32MOR

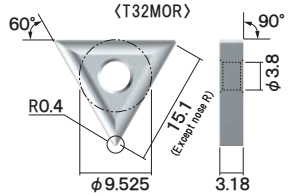
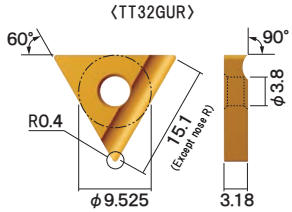
Material	Material Model / Feed per blade (fz)	NK2001	NK1010	NK2020	NK3030	NK6060
		Cutting speed (m / min)				
General Steel	0.08～0.2	200～250		150～200	150～200	
Alloy Steel	0.08～0.2	200～250		150～200	150～200	
Stainless Steel	0.08～0.2		※FCD	100～150	100～150	100～150
Aluminum,Resin,Brass	0.08～0.2					
Castings	0.08～0.2	200～250 ※ FCD cutting the time	100～150			

TT32GUR

Material	material Model / Feed per blade (fz)	NK2001	NK1010	NK2020	NK3030	NK5050	NK6060	NK8080	AC15N	HSS	HSS TiN
		Cutting speed (m / min)									
General Steel	0.08～0.2	200～250		150～200	150～200		150～200		150～200	13～23	15～25
Alloy Steel	0.08～0.2	200～250		150～200	150～200		150～200		150～200	10～20	13～22
Stainless Steel	0.08～0.2			120～180	150～200	120～180	150～200	150～200 (SUS316)	150～200	10～15	11～17
Aluminum,Resin,Brass	0.08～0.2		250～800			250～800		300～1,000		31～40	31～47
Castings	0.08～0.2	200～250 (FCD)									

- According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
  In case of process with large amount chamfer, please take reducing cutting condition
- You have been to the workpiece by recommended Inset.
- In case of chamfering process of stainless steel,please take the down cutting

Insert

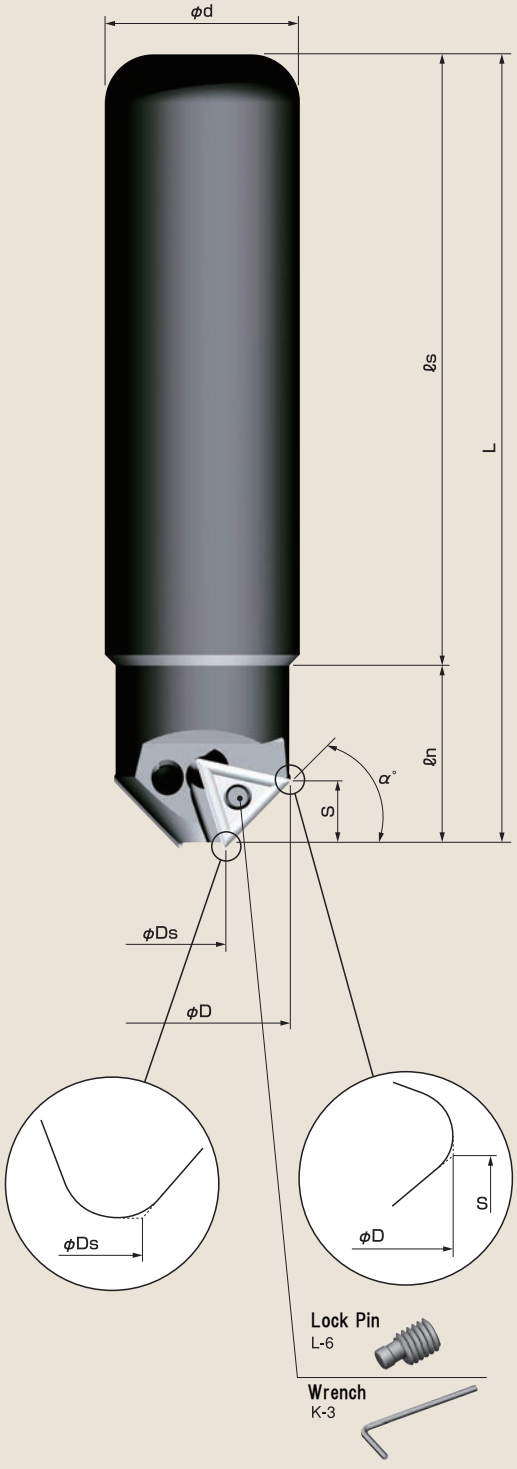
Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
<T32MOR>  	T32MOR NK2001	Cermet	Honing edge	None	6	12
	T32MOR NK1010	Carbide K10	Sharp edge	None	6	12
	T32MOR NK2020	Carbide M20	Honing edge	None	6	12
	T32MOR NK3030	Carbide M20	Honing edge	TiN	6	12
	T32MOR NK6060	Carbide M20	Honing edge	TiAlN	6	12
<TT32GUR>  	TT32GUR NK2001	Cermet	Honing edge	None	2	12
	TT32GUR NK1010	Carbide K10	Sharp edge	None	2	12
	TT32GUR NK2020	Carbide M20	Honing edge	None	2	12
	TT32GUR NK3030	Carbide M20	Honing edge	TiN	2	12
	TT32GUR NK5050	Carbide K10	Sharp edge	TiN	2	12
	TT32GUR NK6060	Carbide M20	Honing edge	TiAlN	2	12
	TT32GUR NK8080	Carbide K10	Sharp edge	TiAlN	2	12
	TT32GUR AC15N	Fine particles Carbide	Honing edge	AlCrN	2	12
	TT32GUR HSS	HSS	Sharp edge	None	2	12
	TT32GUR HSS TiN	HSS	Sharp edge	TiN	2	12

Chamfering Cutter

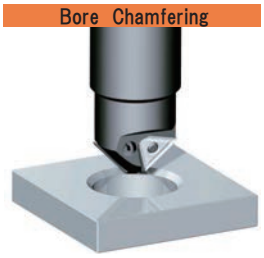
Applications use	NK1536T	NK2035T	NK2535T	NK3030T	NK3532T	NK4031T	NK4530T	NK5031T	NK5532T	NK6030T	NK6533T	NK7032T	NK7533T
α°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°
Bore chamfering	φ8～36mm	φ8～36mm	φ8～35mm	φ8～33mm	φ8～32mm	φ8～31mm	φ8～29mm	φ12～31mm	φ15～32mm	φ15～30mm	φ20～33mm	φ22～32mm	φ25～33mm

Wide variety!

- Angle 15 ° ～ 75 ° (by5° increments) can be chosen according your application
- Insert available are rich and will meet with various applicationsyou may need

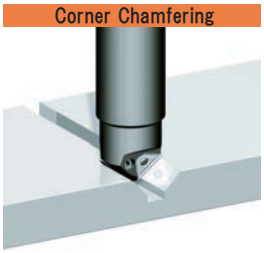


Bore Chamfering



Corner Chamfering

Corner Chamfering



Body

Model. No.	Blades	Dimensions (mm) φD	Minimum cutting diameter φDs	φd	L	ℓs	ℓn	S	α°
NK1536T-20	2	37.9	8	20	130	100	30	4.0	15°
NK1536T-25	2	37.9	8	25	130	100	30	4.0	15°
NK1536T	2	37.9	8	32	130	100	30	4.0	15°
NK1536TL	2	37.9	8	32	170	140	30	4.0	15°
NK2035T-20	2	37.1	8	20	130	100	30	5.3	20°
NK2035T-25	2	37.1	8	25	130	100	30	5.3	20°
NK2035T	2	37.1	8	32	130	100	30	5.3	20°
NK2035TL	2	37.1	8	32	170	140	30	5.3	20°
NK2535T-20	2	36.0	8	20	130	100	30	6.5	25°
NK2535T-25	2	36.0	8	25	130	100	30	6.5	25°
NK2535T	2	36.0	8	32	130	100	30	6.5	25°
NK2535TL	2	36.0	8	32	170	140	30	6.5	25°
NK3030T-20	2	34.8	8	20	130	100	30	7.7	30°
NK3030T-25	2	34.8	8	25	130	100	30	7.7	30°
NK3030T	2	34.8	8	32	130	100	30	7.7	30°
NK3030TL	2	34.8	8	32	170	140	30	7.7	30°
NK3532T-20	2	33.3	8	20	130	100	30	8.9	35°
NK3532T-25	2	33.3	8	25	130	100	30	8.9	35°
NK3532T	2	33.3	8	32	130	100	30	8.9	35°
NK3532TL	2	33.3	8	32	170	140	30	8.9	35°
NK4031T-20	2	31.7	8	20	130	100	30	9.9	40°
NK4031T-25	2	31.7	8	25	130	100	30	9.9	40°
NK4031T	2	31.7	8	32	130	100	30	9.9	40°
NK4031TL	2	31.7	8	32	170	140	30	9.9	40°
NK4530T-20	2	29.9	8	20	130	100	30	10.9	45°
NK4530T-25	2	29.9	8	25	130	100	30	10.9	45°
NK4530T	2	29.9	8	32	130	100	30	10.9	45°
NK4530TL	2	29.9	8	32	170	140	30	10.9	45°
NK5031T-20	2	31.9	12	20	130	100	30	11.8	50°
NK5031T-25	2	31.9	12	25	130	100	30	11.8	50°
NK5031T	2	31.9	12	32	130	100	30	11.8	50°
NK5031TL	2	31.9	12	32	170	140	30	11.8	50°
NK5532T-20	2	32.7	15	20	130	100	30	12.7	55°
NK5532T-25	2	32.7	15	25	130	100	30	12.7	55°
NK5532T	2	32.7	15	32	130	100	30	12.7	55°
NK5532TL	2	32.7	15	32	170	140	30	12.7	55°
NK6030T-20	2	30.5	15	20	130	100	30	13.4	60°
NK6030T-25	2	30.5	15	25	130	100	30	13.4	60°
NK6030T	2	30.5	15	32	130	100	30	13.4	60°
NK6030TL	2	30.5	15	32	170	140	30	13.4	60°
NK6533T-20	2	33.1	20	20	130	100	30	14.0	65°
NK6533T-25	2	33.1	20	25	130	100	30	14.0	65°
NK6533T	2	33.1	20	32	130	100	30	14.0	65°
NK6533TL	2	33.1	20	32	170	140	30	14.0	65°
NK7032T-20	2	32.6	22	20	130	100	30	14.5	70°
NK7032T-25	2	32.6	22	25	130	100	30	14.5	70°
NK7032T	2	32.6	22	32	130	100	30	14.5	70°
NK7032TL	2	32.6	22	32	170	140	30	14.5	70°
NK7533T-20	2	33.0	25	20	130	100	30	15.0	75°
NK7533T-25	2	33.0	25	25	130	100	30	15.0	75°
NK7533T	2	33.0	25	32	130	100	30	15.0	75°
NK7533TL	2	33.0	25	32	170	140	30	15.0	75°

※ Inset is not Included. Please Order Spearately.
※ Lock pin Wrench we have Standard Equipment.

⚠ When mounting insert, please do not take reverse tightening.
Due to the eccentricity looking mechanism ,poor accuracy or breakage of insert may be occurred
When replacing insert, please confirm twhether you have been taking reserve tightening or not.

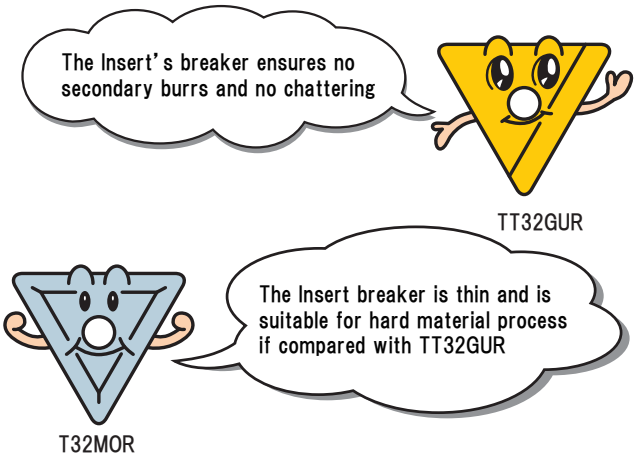
Processing Example

[C5 chamfering]

- Body : NK4530T-MD
- Insert : TT32GUR AC15N
- Material·····SUS304
- Rotation Speed··2,000r.p.m
- Table feed·····200/min
- Cuting Depth····C5
- Cutting Oil·····None

Result

Good!
No secondary burrs and
No chattering after processing



Cuttinng Conditions

T32MOR

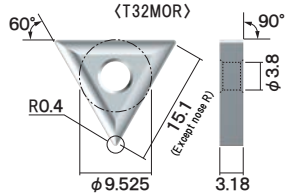
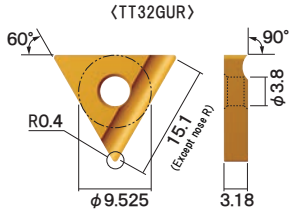
Material	Material Model / Feed per blade (fz)	NK2001	NK1010	NK2020	NK3030	NK6060
		Cutting speed (m / min)				
General Steel	0.08~0.2	200~250		150~200	150~200	
Alloy Steel	0.08~0.2	200~250		150~200	150~200	
Stainless Steel	0.08~0.2		※FCD	100~150	100~150	100~150
Aluminum,Resin,Brass	0.08~0.2					
Castings	0.08~0.2	200~250 ※ FCD cutting the time	100~150			

TT32GUR

Material	material Model / Feed per blade (fz)	NK2001	NK1010	NK2020	NK3030	NK5050	NK6060	NK8080	AC15N	HSS	HSS TiN
		Cutting speed (m / min)									
General Steel	0.08~0.2	200~250		150~200	150~200		150~200		150~200	13~23	15~25
Alloy Steel	0.08~0.2	200~250		150~200	150~200		150~200		150~200	10~20	13~22
Stainless Steel	0.08~0.2			120~180	150~200	120~180	150~200	150~200 (SUS316)	150~200	10~15	11~17
Aluminum,Resin,Brass	0.08~0.2		250~800			250~800		300~1,000		31~40	31~47
Castings	0.08~0.2	200~250 (FCD)									

- According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
  In case of process with large amount chamfer, please take reducing cutting condition
- You have been to the workpiece by recommended Inset.
- In case of chamfering process of stainless steel,please take the down cutting

Insert

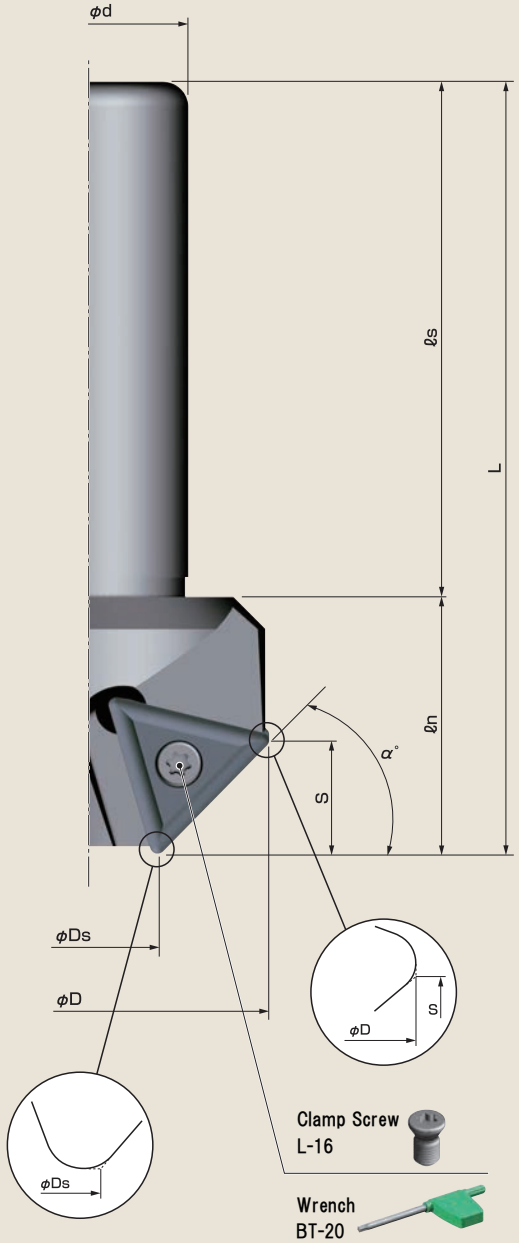
Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
<T32MOR>  	T32MOR NK2001	Cermet	Honing edge	None	6	12
	T32MOR NK1010	Carbide K10	Sharp edge	None	6	12
	T32MOR NK2020	Carbide M20	Honing edge	None	6	12
	T32MOR NK3030	Carbide M20	Honing edge	TiN	6	12
	T32MOR NK6060	Carbide M20	Honing edge	TiAℓN	6	12
<TT32GUR>  	TT32GUR NK2001	Cermet	Honing edge	None	2	12
	TT32GUR NK1010	Carbide K10	Sharp edge	None	2	12
	TT32GUR NK2020	Carbide M20	Honing edge	None	2	12
	TT32GUR NK3030	Carbide M20	Honing edge	TiN	2	12
	TT32GUR NK5050	Carbide K10	Sharp edge	TiN	2	12
	TT32GUR NK6060	Carbide M20	Honing edge	TiAℓN	2	12
	TT32GUR NK8080	Carbide K10	Sharp edge	TiAℓN	2	12
	TT32GUR AC15N	Fine particles Carbide	Honing edge	AlCrN	2	12
	TT32GUR HSS	HSS	Sharp edge	None	2	12
	TT32GUR HSS TiN	HSS	Sharp edge	TiN	2	12

Youngmen

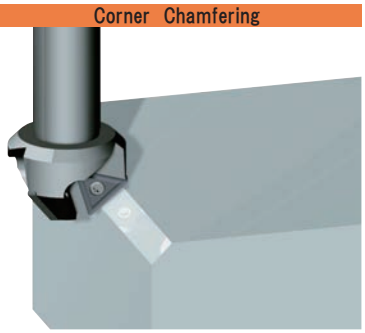
Corner Chamfering | Max. 23.3mm Blade Length | 1Blade 3Blade

C15 Chamfering !

● Economical and Heavy Cutting



Corner Chamfering



Body

Model. No.	Blades	Dimensions(mm)							α°
		ϕD	ϕDs	ϕd	L	ℓs	ℓn	S	
BNK4546T-1	1	46.5	12	32	120	80	40	17.2	45°
BNK3062T	3	62.2	20	32	120	80	40	11.8	30°
BNK4558T	3	58.2	23.8	32	120	80	40	17.2	45°
BNK6058T	3	58.2	33.8	32	120	80	40	21.1	60°

※ Insert is not equipped as standard accessory
※ Clamp screw and wrench are supplied as standard accessory

Cuttinng Conditions

		TNEX270412	TNMX270412	
Material	Material Model	ZA10T	AA20T	AC15N
	Feed per blade (fz)	Rotation speed (r.p.m.)		
General Steel	0.04~0.12		800~1500	800~1500
Alloy Steel	0.04~0.12		800~1500	800~1500
Stainless Steel	0.04~0.12		600~1200	600~1200
Aluminum,Resin,Brass	0.06~0.18	2,500~4,000		
Cast Steel	0.04~0.12	800~1,500		

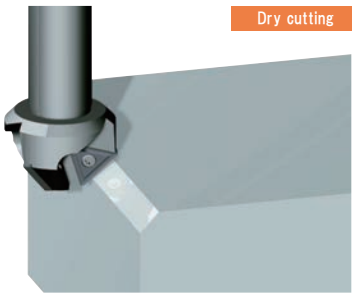
- According to the shape of work, clamp condition and large or small chamfering amount, the cutting condition will have to be adjusted.
- Yellow marked condition is recommended for the material listed
- In case of chamfering process of Stainless steel, kindly take down cutting

Processing Example

[C15 Chamfering]

- Body : BNK4558T
- Insert : TNMX270412 AA20T
  - Material·····SUS304
  - Rotation Speed···800r.p.m
  - Table feed·····100mm/min
  - Cutting Depth····C15
  - Cutting Oil·····None

Dry cutting



Result

Good!
By one pass process,C15 Chamfer
has been successfully made without chattering

Insert

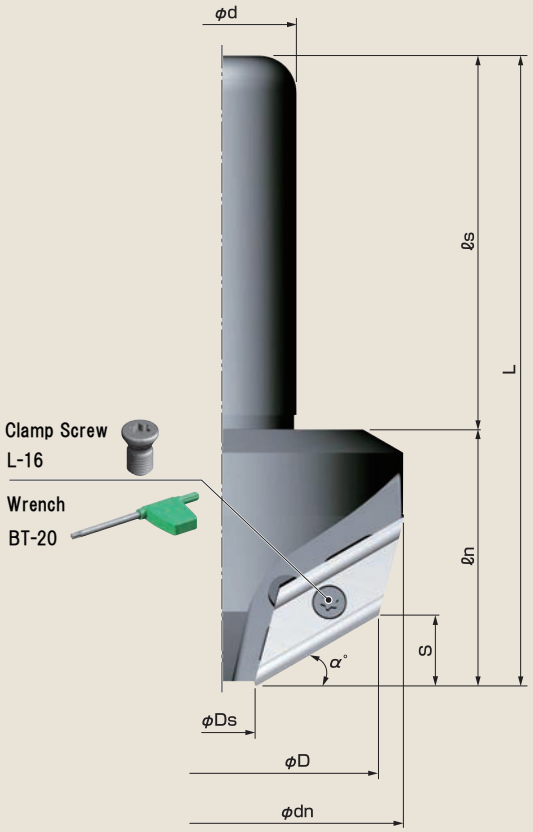
Figure	Model.No.	Material	Blade Shape	Coating	Usable Corner	Quantity per box
〈TNEX270412〉 60° 90° R1.2 23.3 (Except nose R) ϕ5.9 ϕ15.875 4.76	TNEX270412 ZA10T	Carbide K10	Sharp edge	None	2	3
〈TNMX270412〉 60° 90° R1.2 23.3 (Except nose R) ϕ5.9 ϕ15.875 4.76	TNMX270412 AA20T	Carbide M20	Honing edge	AlCrN	6	3
	TNMX270412 AC15N	Fine particles Carbide	Honing edge	AlCrN	6	3

Gentlemen

Corner Chamfering | Max,30mm blade length | 1Blade 3Blade

Max,30mm Blade Length!

- 30mm blade length and originally designed breaker ensured maximum 30mm Chanfering process without chatterring
- Line-up 5°~85° Angle process are ensured



Corner Chamfering

Body

Model. No.	Blades	Dimensions (mm) φD	φDs	φd	φdn	L	ℓs	ℓn	S	α°
NK4554X-1	1	54.9	12.0	32		135	80	55	21.4	45
NEW NK0574X	3	74.8	15.0	32	102.8	135	80	55	2.6	5
NEW NK1074X	3	74.5	15.0	32	99.5	135	80	55	5.2	10
NK1571X	3	73.3	15.0	32	95.2	135	80	55	7.8	15
NK2070X	3	71.8	15.0	32	90.3	135	80	55	10.3	20
NK2568X	3	69.8	15.0	32	84.9	135	80	55	12.8	25
NK3080X	3	67.4	15.0	32	79.0	135	80	55	15.1	30
NK3563X	3	64.6	15.0	32	72.8	135	80	55	17.4	35
NK4060X	3	61.4	15.0	32	66.3	135	80	55	19.5	40
NK4557X	3	57.9	15.0	32		135	80	55	21.4	45
NK5056X	3	57.0	18.0	32		135	80	55	23.2	50
NK5556X	3	56.8	22.0	32		135	80	55	24.8	55
NK6054X	3	54.3	24.0	32		135	80	55	26.3	60
NK6553X	3	53.6	28.0	32		145	80	65	27.5	65
NK7052X	3	52.8	32.0	32		145	80	65	28.5	70
NK7550X	3	50.7	35.0	32		145	80	65	29.3	75
NEW NK8048X	3	48.5	38.0	32		145	80	65	29.9	80
NEW NK8547X	3	47.3	42.0	32		145	80	65	30.3	85

※ Inset is not equipped as standard accessory
※ Clamp screw and wrench are supplied as standard accessory

Processing Example

[C20 Chamfering]

Dry cutting

- Body : NK4557X
- Insert : X63GUR NK6060

- Material ·····SUS304
- Rotation Speed ··800r.p.m
- Table feed ·····150mm/min
- Cutting Depth ···C20
- Cutting Oil ·····None

Result

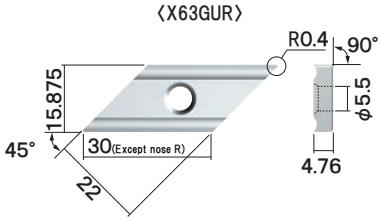
Good!
By one pass process,C20 Chamfer
has been successfully made without chattering

Cuttinng Conditions

X63GUR					
Material \ material Model	Feed per blade (fz)	NK1010	NK2020	NK6060	AC15N
		Rotation speed (r.p.m.)			
General Steel	0.05~0.15		1,000~2,000	1,000~2,000	1,000~2,000
Alloy Steel	0.05~0.15		1,000~2,000	1,000~2,000	1,000~2,000
Stainless Steel	0.05~0.15		700~1,500	700~1,500	700~1,500
Aluminum,Resin,Brass	0.08~0.2	3,000~5,000			
Cast Steel	0.05~0.15	1,000~2,000			

- According to the shape of work, clamp condition and large or small chamfering amount, the cutting condition will have to be adjusted.
- Yellow marked condition is recommended for the material listed
- In case of chamfering process of Stainless steel, kindly take down cutting

Insert

Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
〈X63GUR〉 	X63GUR NK1010	Carbide K10	Sharp edge	None	2	3
	X63GUR NK2020	Carbide M20	Honing edge	None	2	3
	X63GUR NK6060	Carbide M20	Honing edge	TiAℓN	2	3
	X63GUR AC15N	Fine particles Carbide	Honing edge	AlCrN	2	3

Mentrube

For Drilling Machine

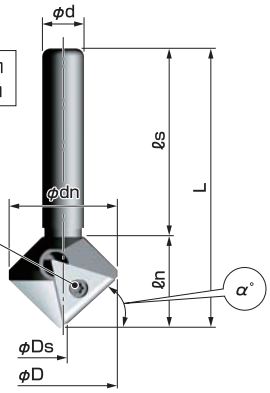
- Fantastic machining with HSS insert and breaker originally designed by us
  Line-up 30°,45° and 60° fantastic angle processing are ensured

1 BM4524T

TM32GUR : φ5mm～φ24mm
TM32GSR : φ5mm～φ21mm

Clamp Screw
M-1

Wrench
MA-1

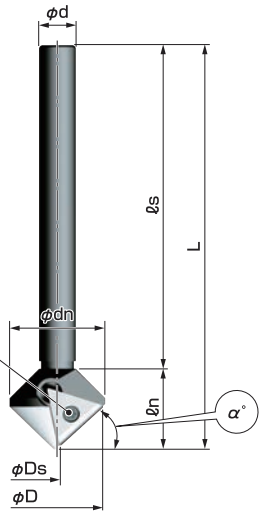


2 BM4524TL

TM32GUR : φ5mm～φ24mm
TM32GSR : φ5mm～φ21mm

Clamp Screw
M-1

Wrench
MA-1

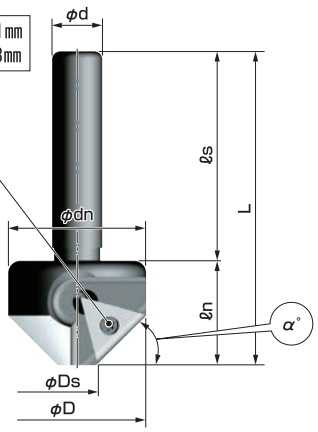


3 BM4531T

TM32GUR : φ12mm～φ31mm
TM32GSR : φ12mm～φ28mm

Clamp Screw
M-1

Wrench
MA-1

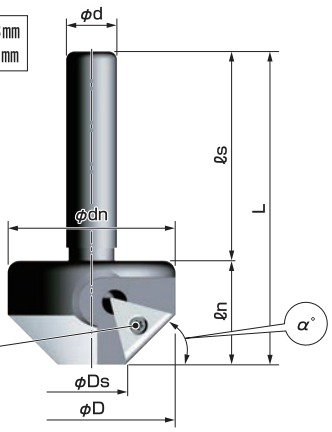


4 BM4538T

TM32GUR : φ19mm～φ38mm
TM32GSR : φ19mm～φ36mm

Old type
Lock pin
L-6
Wrench
K-3

New type
Clamp Screw
M-1
Wrench
MA-1

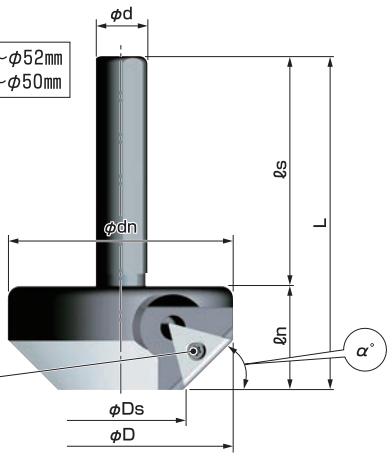


5 BM4552T

TM32GUR : φ33mm～φ52mm
TM32GSR : φ33mm～φ50mm

Old type
Lock pin
L-6
Wrench
K-3

New type
Clamp Screw
M-1
Wrench
MA-1

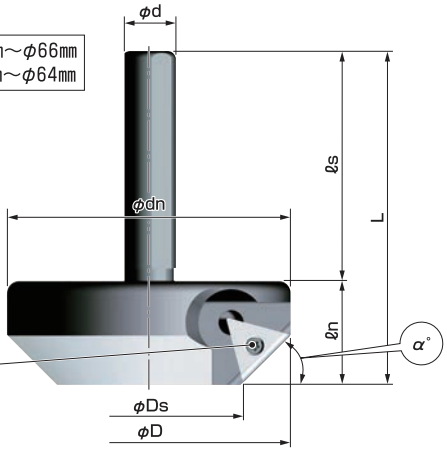


6 BM4566T

TM32GUR : φ47mm～φ66mm
TM32GSR : φ47mm～φ64mm

Old type
Lock pin
L-6
Wrench
K-3

New type
Clamp Screw
M-1
Wrench
MA-1

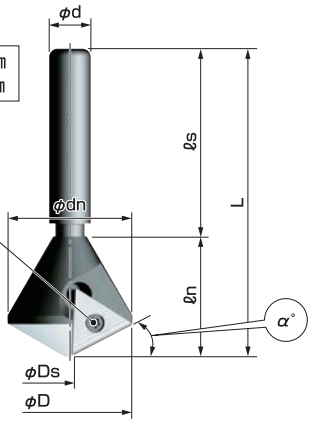


7 BM3029T

TM32GUR : φ6mm～φ29mm
TM32GSR : φ6mm～φ26mm

Clamp Screw
M-1

Wrench
MA-1

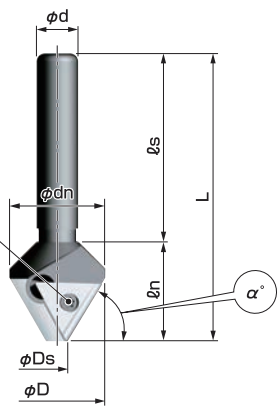


8 BM6021T

TM32GUR : φ7mm～φ21mm
TM32GSR : φ7mm～φ19mm

Clamp Screw
M-1

Wrench
MA-1

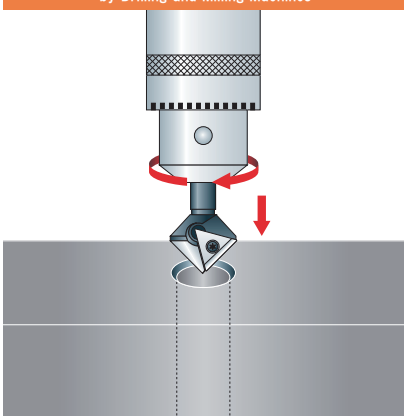


Body

Model. No.	Figure Fig.	Blades	Dimensions (mm)							
			φD	φDs	φd	φdn	L	ℓs	ℓn	α°
BM4524T	①	1	25.20	4.49	10	26	67	45	22	45°
BM4524TL	②	1	25.20	4.49	10	26	110	88	22	45°
BM4531T	③	1	33.6	11.57	12	33	75	50	25	45°
BM4538T	④	1	39.83	18.17	12	40	75	50	25	45°
BM4552T	⑤	1	53.91	32.17	13	54	80	55	25	45°
BM4566T	⑥	1	67.94	46.17	13	68	80	55	25	45°
BM3029T	⑦	1	30.2	5.52	10	30	74	45	29	30°
BM6021T	⑧	1	21.77	6.60	10	23	69	45	24	60°

※ 1 piece TM32GUR HSS Insert is supplied as standard accessory
※ Clamp Screw, lock pin and wrench are supplied as standard accessory

Chamfering and Deburring by Drilling and Milling Machines



Cuttinng Conditions

Model. No.	TM32GUR HSS	TM32GUR HSS TiAℓN	TM32GSR HSS	TM32GSR HSS TiAℓN
	Rotation Speed (r.p.m.)			
BM4524T	160~320	200~400	160~320	200~400
BM4524TL	160~320	200~400	160~320	200~400
BM4531T	130~280	150~350	130~280	150~350
BM4538T	130~280	150~350	130~280	150~350
BM4552T	80~120	100~150	80~120	100~150
BM4566T	40~80	50~100	40~80	50~100
BM3029T	160~320	200~400	160~320	200~400
BM6021T	160~320	200~400	160~320	200~400

Model. No.	Capacity	
	Bore chamfering	
	TM32GUR	TM32GSR
BM4524T	φ5mm~φ24mm	φ5mm~φ21mm
BM4524TL	φ5mm~φ24mm	φ5mm~φ21mm
BM4531T	φ12mm~φ31mm	φ12mm~φ28mm
BM4538T	φ19mm~φ38mm	φ19mm~φ36mm
BM4552T	φ33mm~φ52mm	φ33mm~φ50mm
BM4566T	φ47mm~φ66mm	φ47mm~φ64mm
BM3029T	φ6mm~φ29mm	φ6mm~φ26mm
BM6021T	φ7mm~φ21mm	φ7mm~φ19mm

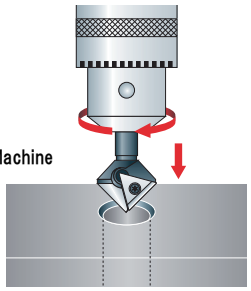
- Depending on the Machine's rigidity, above conditions may not be Suitable.
  In case of soft material like Aluminum,Copper etc ,reduce rotation speed accordingly
  In case the chattering is occurred, rotation speed will have to be reduced and use cutting oil
- Please use our original Insert for our tool
- According to the shape, clamp condition and volume of chamfering amount the above cutting condition have to be adjusted. For large amount chamfering, the rate will have to be reduced

Processing Example

[φ12mm Bore mouth chamfering]

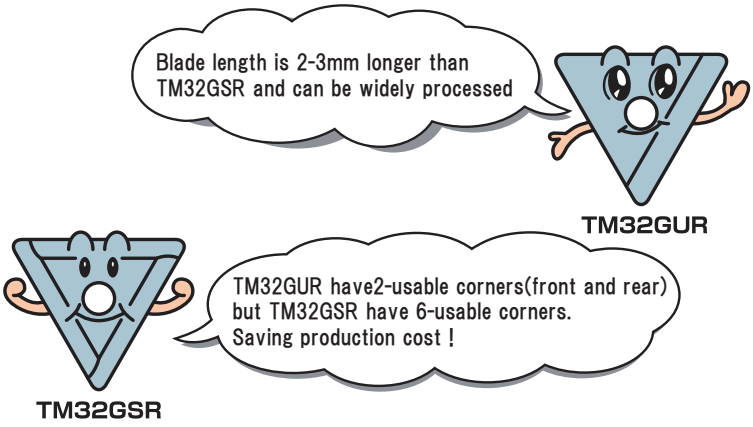
- Body : BM4524T
- Insert : TM32GUR HSS

- Material ····· SUS304
- Rotation Speed ·· 320r.p.m.
- Use machine ·· Bench type Drilling Machine

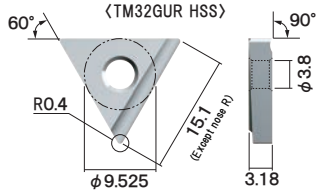
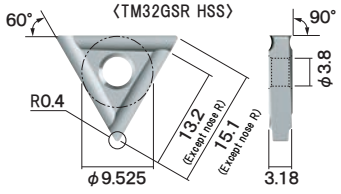


Result

Good ! No deburring even after more than 1000 time processing



Insert

Figure	Model.No.	Material	Blade Shape	Coating	Usable Corner	Quantity per box
	TM32GUR HSS	HSS	Sharp edge	None	2	3
	TM32GUR HSS TiAℓN	HSS	Sharp edge	TiAℓN	2	3
	TM32GSR HSS	HSS	Sharp edge	None	6	3
	TM32GSR HSS TiAℓN	HSS	Sharp edge	TiAℓN	6	3

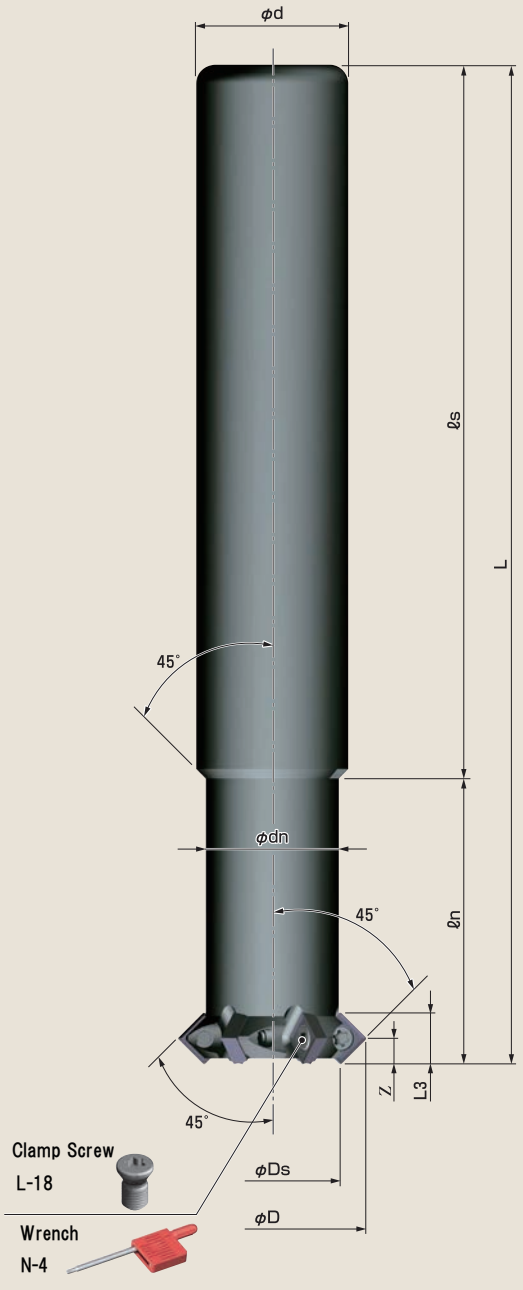
⚠ Please do not take reverse tightening when mounting insert. Poor accuracy or breakage of insert could be occurred
Please make sure that reverse tightening is made or not

Chibi Ryanmen

Corner Chamfering | Reverse chamfering process | Side V-groove process | 2Blade | 6Blade

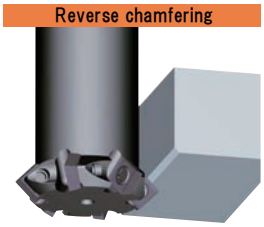
Smallest Multi-Blade Tools!

● Enable front/reverse chamfering and V-grooving

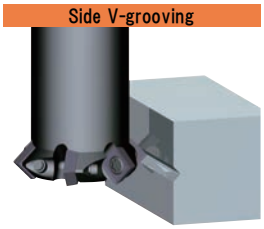


Corner Chamfering

Reverse chamfering



Side V-grooving



Model. No.	Capacity
	Bore chamfering
TR10-12S	φ6㎜～φ11.24㎜
TR16-20S	φ14.5㎜～φ19.8㎜

※ Steel: C2 is maximum
※ Stainless Steel: C1 is maximum

Body

Model. No.	Blades	Dimensions (㎜)								
		φD	φDs	φdn	φd	L	ℓs	ℓn	L3	Z
TR10-12S	2	11.24	6	6	10	70	55	15	5.45	2.72
TR16-20S	6	19.8	14.5	14	16	105	75	30	5.45	2.72

※ Inset is not supplied as standard accessory. Please order separately.
※ Clamp screw wrench are supplied as standard accessory

Cuttinng Conditions

SPMT030102

Material \ material Model	ZA20N	AA20N
Feed per blade (fz)		
General Steel	0.03～0.05	100～150	100～150
Alloy Steel	0.03～0.05	100～150	100～150
Stainless Steel	0.03～0.05	80～120	80～120
Aluminum,Resin,Brass	0.03～0.05	150～400	150～400
Cast Steel	0.03～0.05	100～150	100～150

● According to the shape of work, clamp condition and large or small chamfering amount and position of blade, the cutting condition will have to be adjusted.
● In case of large amount chamfering process. please reduce the condition
● In case of chamfering process of Stainless steel, kindly take down cutting

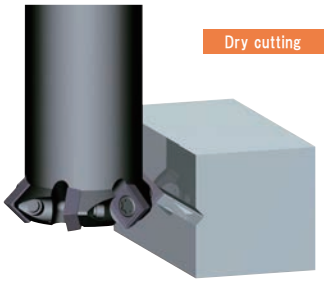
Processing Example

[Side V-grooving process]

Body : TR16-20S
Insert : SPMT030102 AA20N

- Material ····· SUS304
- Rotation Speed ·· 1,600r,p,m
- Table feed ····· 380mm/min
- Cutting Depth ··· 1mm
- Cutting Oil ····· None

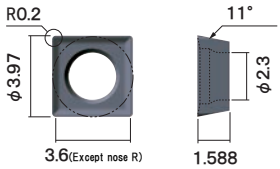
Dry cutting



Result

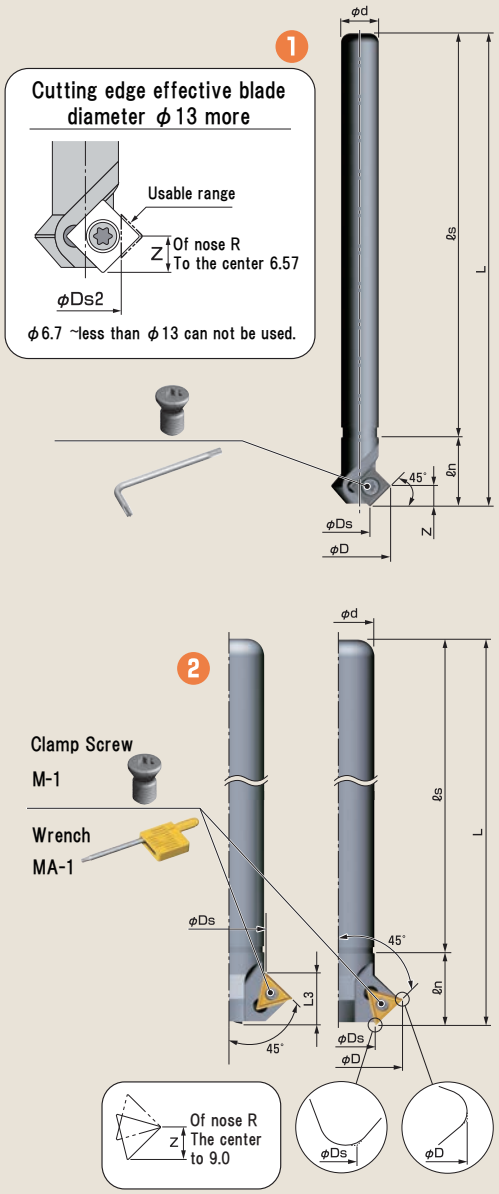
Good!
Without secondary burrs and chattering

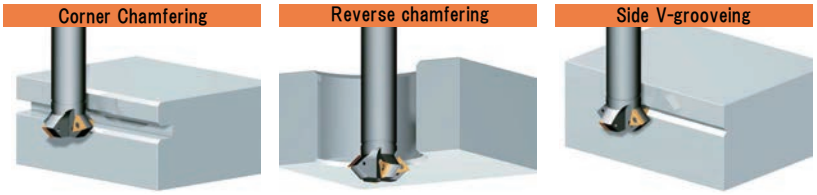
Insert

Figure	Model.No.	Material	Coating	Usable corner	Quantity per box
⟨SPMT030102⟩ 	SPMT030102 ZA20N	Carbide M20	None	4	12
	SPMT030102 AA20N	Carbide M20	AlCrN	4	12

One pass chamfering!

- Enable front/reverse chamfering and V-grooving one pass





Model. No.	Capacity
	Bore chamfering
MRV12-19S	φ13mm～φ19.5mm
RV16-35T	φ18mm～φ35.9mm
RV25-46T	φ28mm～φ45.6mm

Body

Model. No.	Fig.	Blades	Dimensions (mm)									Inserts
			φD	φDs	φDs2	φd	L	ℓs	ℓn	L3	Z	
MRV12-19S	1	1	19.5	6.7	13	12	150	128	22	—	6.57	SPMT090304
RV16-35T	2	Staggered 2 blade	35.9	18		16	200	175	25	18.3	9.0	T22MOR
RV25-46T	2	Staggered 4 blade	45.6	28		25	200	175	25	17.9	9.0	T22MOR

※ Inset is not supplied as standard accessory. Please order spearately.
※ Clamp screw wrench are supplied as standard accessory.

Cuttinng Conditions

Chamfering		
Material	Feed per blade (fz)	Cutting speed (m / min)
General Steel	0.05～0.2	100～150
Alloy Steel	0.05～0.2	100～150
Stainless Steel	0.05～0.2	80～120
Aluminum,Resin, Brass	0.08～0.25	150～400
Cast Steel	0.05～0.2	100～150

Side V Groove Processing		
Material	Feed per blade (fz)	Cutting speed (m / min)
General Steel	0.03～0.1	100～150
Alloy Steel	0.03～0.1	100～150
Stainless Steel	0.03～0.1	80～120
Aluminum,Resin, Brass	0.05～0.15	150～400
Cast Steel	0.03～0.1	100～150

- According to the shape of work, clamp condition and large or small chamfering amount, the cutting condition will have to be adjusted.
- In case of large amount chamfering process, please reduce the condition
- In case of chamfering process of Stainless steel, kindly take down cutting

Processing Example

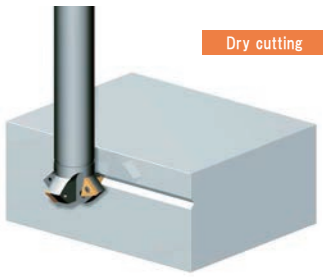
[Side V-grooving process]

Body : RV25-46T
Insert : T22MOR NK5050

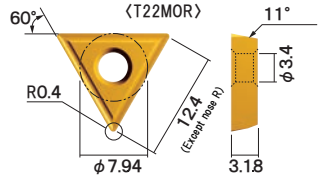
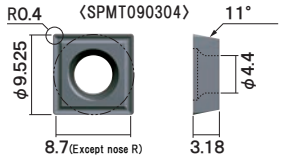
- Material ····· SUS304
- Rotation Speed ·· 800r,p,m
- Table feed ····· 160mm/min
- Cutting Depth ··· 2mm
- Cutting Oil ····· None

Result

Good!
Without secondary burrs and chattering

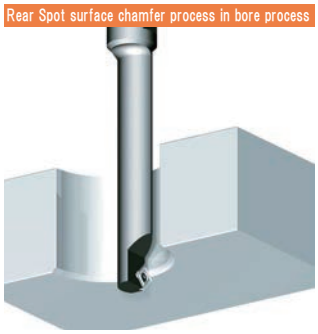


Insert

Figure	Model.No.	Material	Coating	Usable corner	Quantity per box
	T22MOR NK5050	Carbide M10	TiN	3	12
	SPMT090304 NK6060	Carbide M20	TiAℓN	4	12

Uratorimen-C

Rear Spot surface chamfer process in bore process

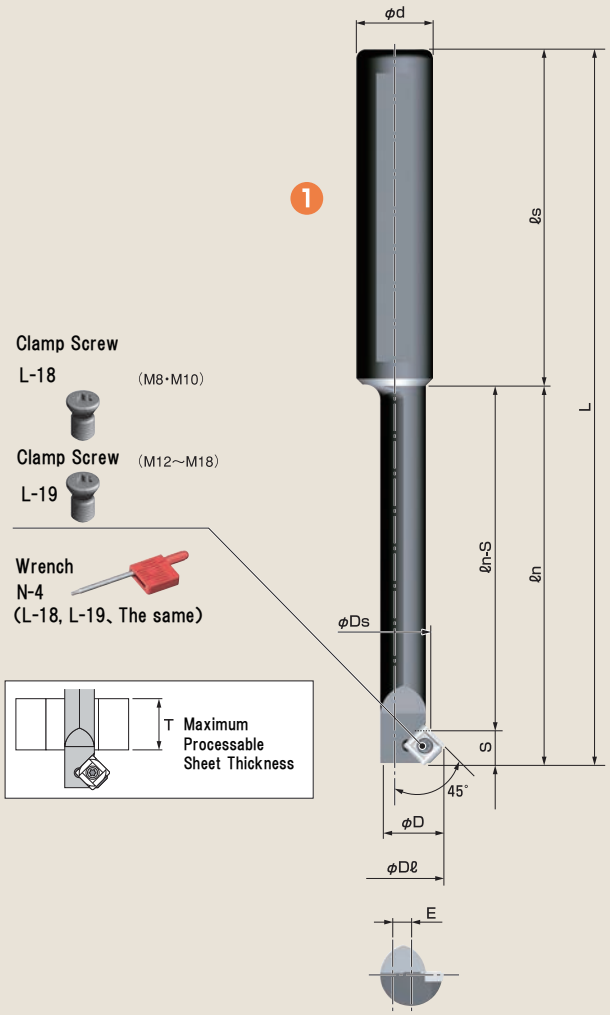


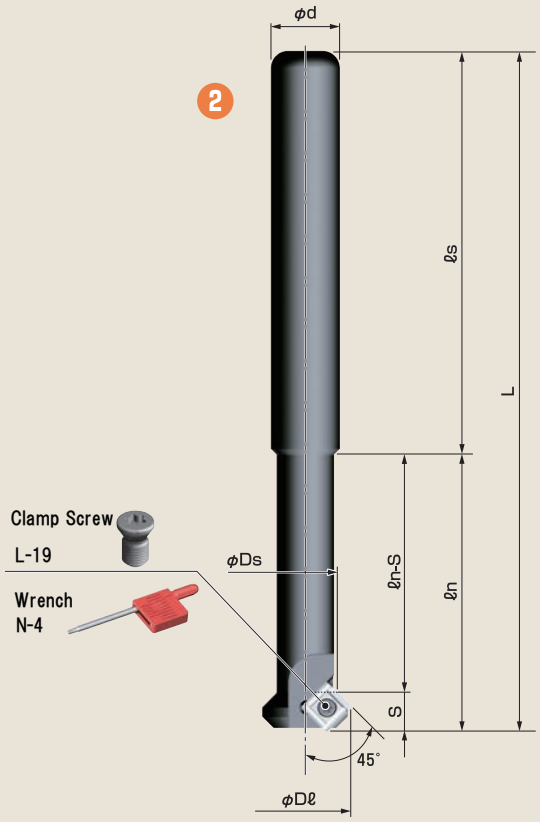
Rear surface Edge chamfering process

Model. No.	Hole diameter	Capacity Rear edge chamfering
UMH12-6.8S-M8	φ6.8mm Over～	φ6.8mm～φ9.7mm
UMH12-8.5S-M10	φ8.5mm Over～	φ8.5mm～φ11.7mm
UMH12-10S-M12	φ10.0mm Over～	φ10.0mm～φ14.8mm
UMH12-12S-M14	φ12.0mm Over～	φ12.0mm～φ16.8mm
UMH12-14S-M16	φ14.0mm Over～	φ14.0mm～φ18.8mm
UMH16-16S-M18	φ16.0mm Over～	φ16.0mm～φ20.8mm
UM12-16S		φ16.0mm Over～

Exclusive use for back chamfering

●This is a special tool for back spot hole chamfering and edge chamfering process





Body

Model. No.	Fig.	Blades	Dimensions (mm)											Inserts
			φD	φDℓ	φDs	φd	L	ℓs	ℓn	ℓn-S	S	T	E	
UMH12-6.8S-M8	1	1	6.2	9.7	6.8	12	107	70	37	32.2	4.8	28	1.76	SP-SPET040102
UMH12-8.5S-M10	1	1	7.5	11.7	8.5	12	117	70	47	42.0	5	38	2.11	SPET040102
UMH12-10S-M12	1	1	9.0	14.8	10.0	12	129	70	59	52.1	6.9	47	2.92	SPET06T104
UMH12-12S-M14	1	1	10.0	16.8	12.0	12	134	70	64	57.1	6.9	52	3.42	SPET06T104
UMH12-14S-M16	1	1	12.0	18.8	14.0	12	139	70	69	62.1	6.9	57	3.41	SPET06T104
UMH16-16S-M18	1	1	14.0	20.8	16.0	16	149	70	79	72.1	6.9	67	3.41	SPET06T104
UM12-16S	2	1		16.0	11.0	12	118	70	48	41	7			SPET06T104

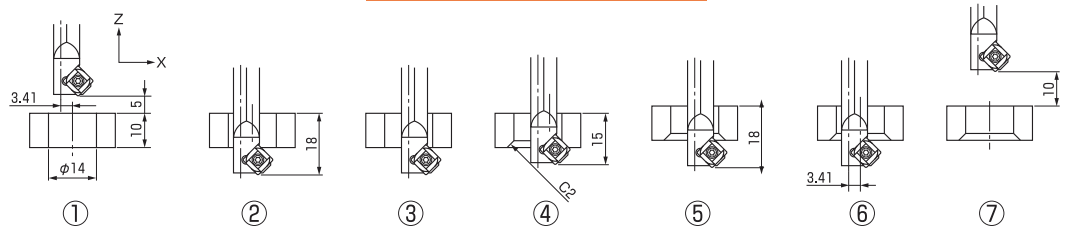
※ Inset is not supplied as standard accessory. Please order separately.
※ Clamp screw and wrench are supplied as standard accessory.

Cuttinng Conditions

Body		UMH12-6.8S-M8 / UMH12-8.5S-M10 / UMH12-10S-M12 UMH12-12S-M14 / UMH12-14S-M16 / UMH16-16S-M18			UM12-16S			
Material	Material Model	NK1010	NK2020	NK6060		NK1010	NK2020	NK6060
	Feed Per Blade (fz)	Cutting speed (m / min)			Feed Per Blade (fz)	Cutting Speed (m / min)		
General Steel	0.03～0.05		25～30	25～30	0.05～0.1		50～70	50～70
Alloy Steel	0.03～0.05		25～30	25～30	0.05～0.1		50～70	50～70
Stainless Steel	0.03～0.05		20～25	25～30	0.05～0.1		40～50	40～50
Aluminum,Resin,Brass	0.03～0.05	30～35			0.05～0.1	80～100		
Cast Steel	0.03～0.05	30～35			0.05～0.1	80～100		

- According to the shape of work, clamp condition, large or small chamfering amount and position of blade, the cutting condition will have to be reduced
- Coolant is recommended
- Yellow marked condition is recommended for the material listed

How to use and Example



Example program (UMH12-14S-M16)

- N10
- G90 G00 G54 X-3.41 Y0 M19
- G43 Z5.0 H3 T11·····①
- G1 Z-18.0 F2000·····②
- X0·····③
- M3 S600
- G1 Z-14.9 F30·····④
- Z-18.0 F200·····⑤
- M19
- X-3.41·····⑥
- G0 Z10.0·····⑦
- G80 Z10.0
- G30 Z10.0

Max, processing thickness: T
Chamfer amount: C
Z = -(T+S-C)

Processing Example

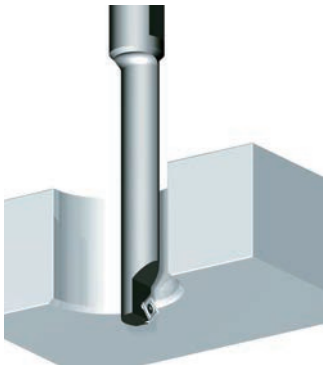
[Eccentric Rear Chamfering Cutter-Test]

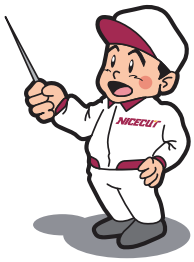
- Body : UMH12-8.5S-M10
- Insert : SPET040102 NK6060

- Material ····· SKD11
- Rotation Speed ··· 800r.p.m.
- Cutting Speed ···· 21m/min
- Table Feed ····· 40/min
- Blade Feed ····· 0.05mm/tooth
- Hole diameter ···· 8.5mm
- Cutting Depth ···· 1mm

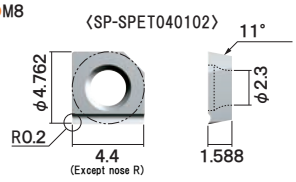
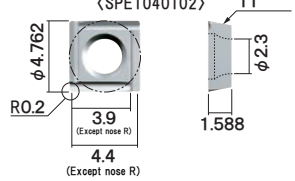
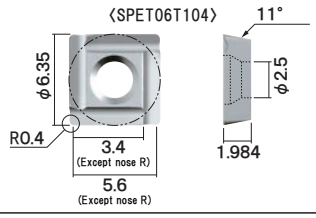
Result

Good!
Without secondary burrs and chattering





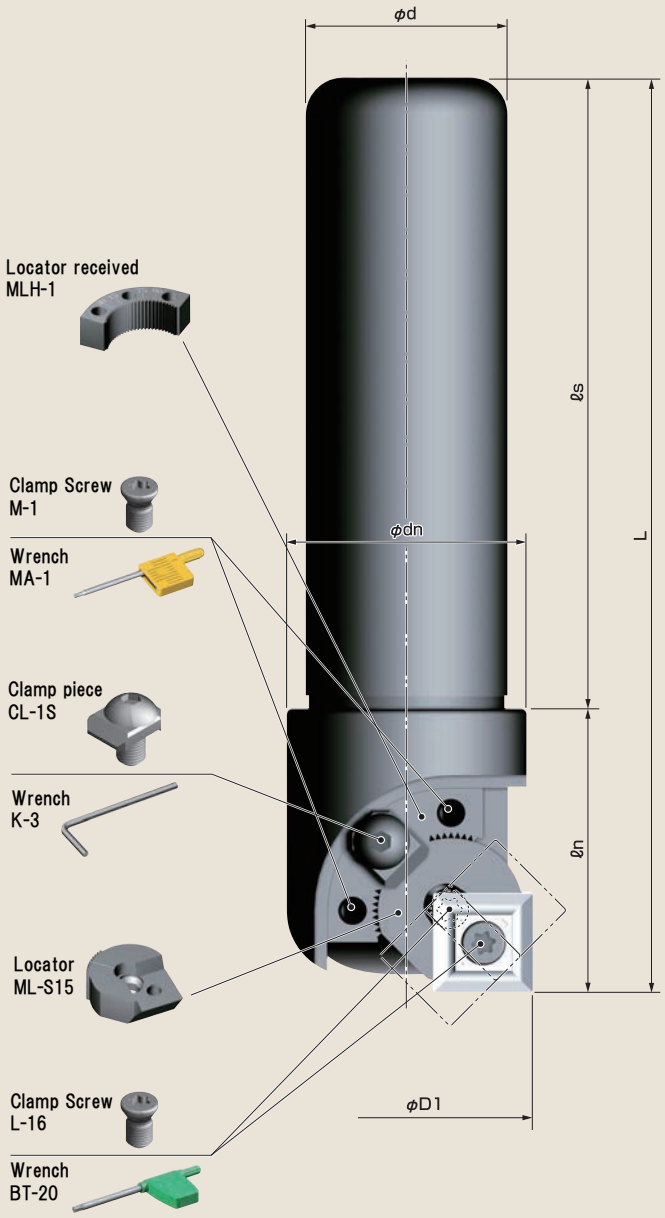
Insert

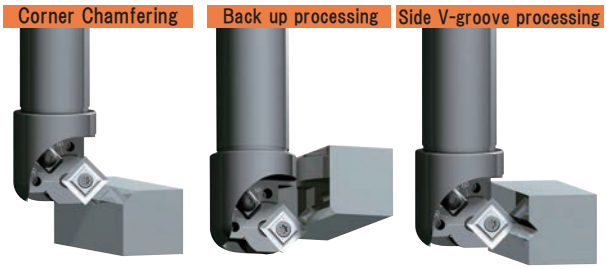
Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
●M8 ⟨SP-SPET040102⟩ 	SP-SPET040102 NK1010	Carbide K10	Sharp edge	None	1	12
	SP-SPET040102 NK2020	Carbide M20	Honing edge	None	1	12
	SP-SPET040102 NK6060	Carbide M20	Honing edge	TiAℓN	1	12
●M10 ⟨SPET040102⟩ 	SPET040102 NK1010	Carbide K10	Sharp edge	None	4	12
	SPET040102 NK2020	Carbide M20	Honing edge	None	4	12
	SPET040102 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
●M12～18/UM12-16S ⟨SPET06T104⟩ 	SPET06T104 NK1010	Carbide K10	Sharp edge	None	4	12
	SPET06T104 NK2020	Carbide M20	Honing edge	None	4	12
	SPET06T104 NK6060	Carbide M20	Honing edge	TiAℓN	4	12

Multi-Angle Mill

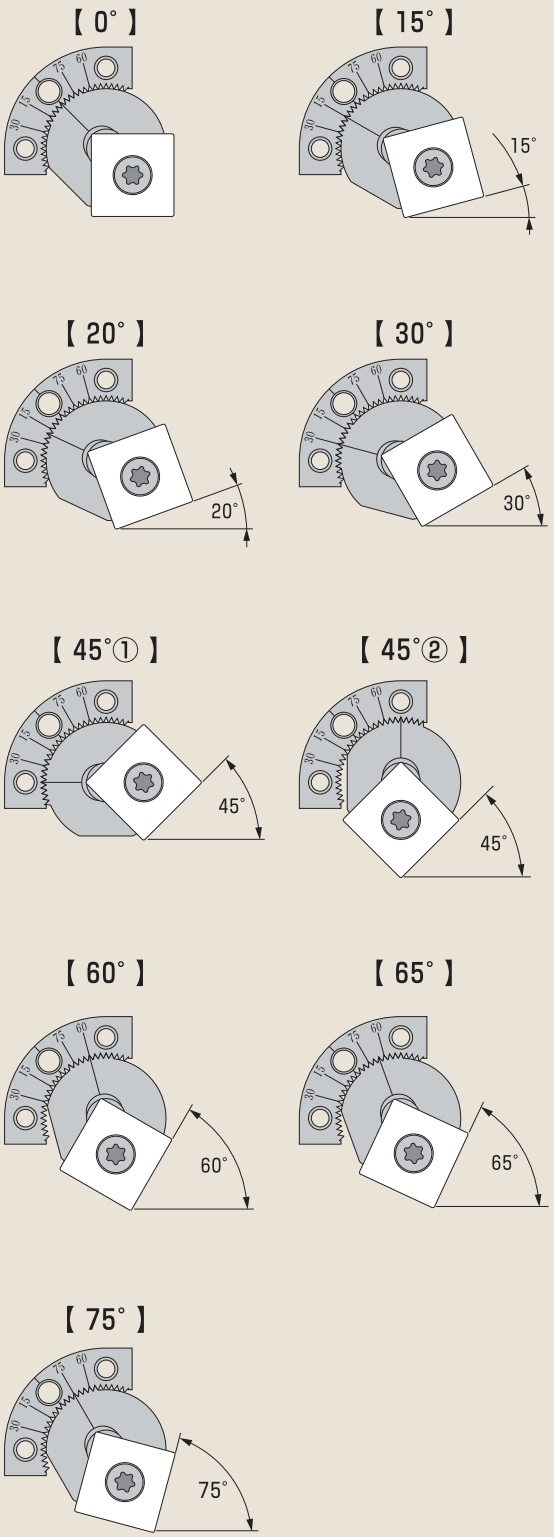
Variable Angle Processing!

● By the serration mechanism and our original double clamp system, holding parts is superior to prevent insert movement.
0°～90° Angle adjustment can be easily and securely made





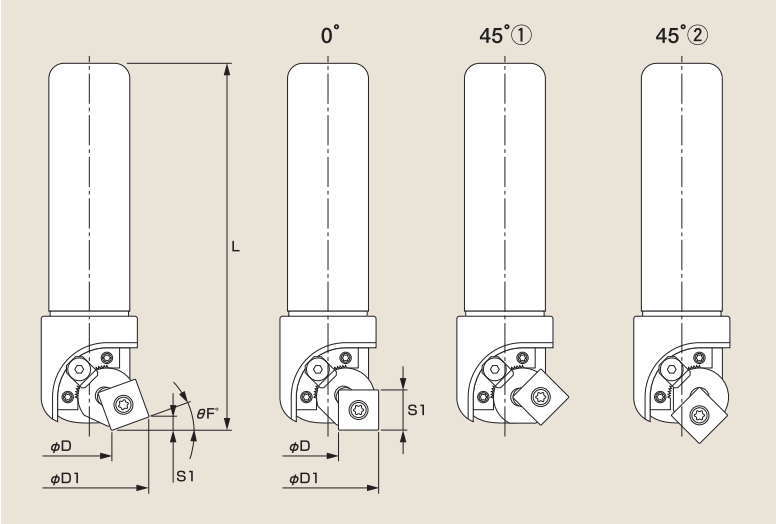
Display for division of angle



Model No.	blades	Dimensions (mm)						Inserts
		φD1	φd	φdn	L	ℓs	ℓn	
MAM32-50S	1	※1	32	38	145	100	45	SDMT150404 SDET150404
MAM32-50SL	1	※1	32	38	200	155	45	SDMT150404 SDET150404

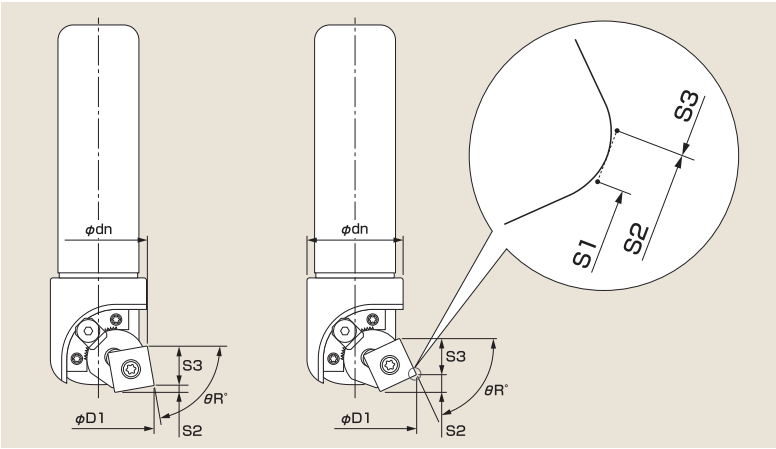
※ Insert is not equipped as standard accessory. Please purchase it separately
※ Clamp screw, wrench and locator are supplied as standard accessories
※ Please refer to angle dimension table (P-28)

<θF°> Angle Dimension Table 1 (MAM32-50S)



θF°	φD	φD1	S1	L
0°	φ8.3	φ40	15.9	145
5°	φ11.3	φ42.1	1.3	145.2
10°	φ13.6	φ44	2.7	145.2
15°	φ15.9	φ45.7	4.0	145.2
20°	φ18.1	φ47.1	5.3	145.1
25°	φ20.4	φ48.3	6.5	144.8
30°	φ22.6	φ49.3	7.7	144.5
35°	φ24.7	φ49.9	8.8	144.1
40°	φ26.7	φ50.3	9.9	143.6
45°①	φ28.7	φ50.5	10.9	143
45°②	φ14.3	φ36	10.9	150.2
50°	φ17.4	φ37.2	11.8	150.2
55°	φ20.5	φ38.2	12.6	150
60°	φ23.6	φ39.1	13.4	149.6
65°	φ26.7	φ39.7	14	149.2
70°	φ29.6	φ40.1	14.5	148.6
75°	φ32.4	φ40.4	14.9	147.8
80°	φ35.1	φ40.5	15.2	147
85°	φ37.6	φ40.3	15.4	146.1

<θF°> Angle Dimension Table 2 (θR°=90°-θF°)



θR°	φD1	φdn	S2	S3
85°	φ42.1	φ39.4	1.7	15.4
80°	φ44	φ38.6	3.1	15.2
75°	φ45.7	φ38.0	4.4	14.3
70°	φ47.1	φ38.0	5.6	12.5
65°	φ48.3	φ38.0	6.9	11.1
60°	φ49.3	φ38.0	8	9.7
55°	φ49.9	φ38.0	9.2	8.5
50°	φ50.3	φ38.0	10.2	7.4
45°	φ50.5	φ38.0	11.2	6.2

Cutting Conditions

Material	Material Model	SDET150404	SDMT150404		
		ZA10N	ZA20N	DA20N	AC15N
	Feed per blade (fz)	Cutting speed (m/min)			
General Steel	0.05~0.15		100~150	100~150	100~150
Alloy Steel	0.05~0.15		100~150	100~150	100~150
Stainless Steel	0.05~0.15		80~120	80~120	80~120
Aluminum,Resin,Brass	0.08~0.2	150~400			
Castings	0.05~0.15		100~150	100~150	

● In case of Stainless steel processing, please take down cut

Processing Example

【Perimetery C5 Chamfering】

■ Body : MAM32-50S

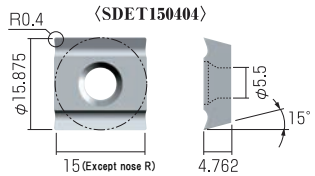
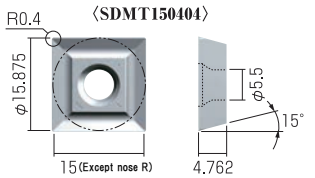
■ Body : SDMT150404 ZA20N

- Material·····S45C
- Rotation Speed···630.p.m.
- Table feed·····63mm/min
- Depth of Cut·····C5
- Cutting Oil·····None

Result

Good!
No secondary burrs and, No chattering after processing

Insert

Figure	Model.No.	Material	Blade Shape	Coating	Usable Corner	Quantity per box
	SDET150404 ZA10N	Carbide K10	Sharp edge	None	2	3
	SDMT150404 ZA20N	Carbide M20	Honing edge	None	4	3
	SDMT150404 DA20N	Carbide M20	Honing edge	TiAℓN	4	3
	SDMT150404 AC15N	Fine particles Carbide	Honing edge	AlCrN	4	3

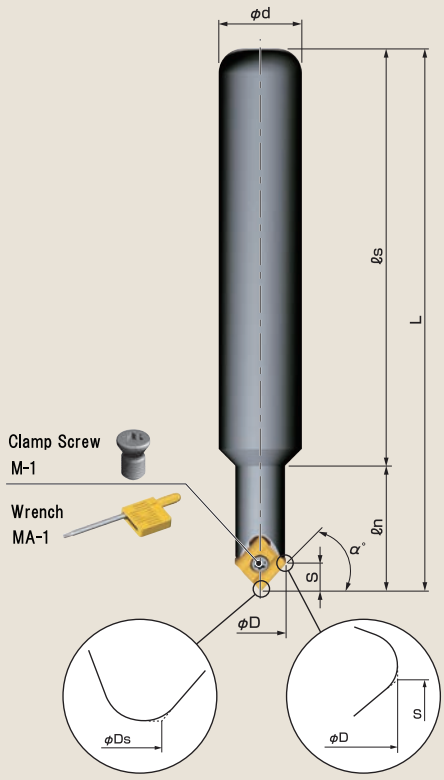
Men Men

Corner Chamfering | Max. blade length about 9mm | 1Blade

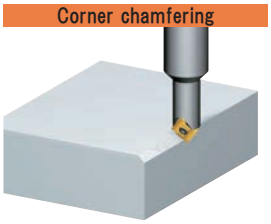
Applications use	Capacity												
	SNK1516C	SNK2016C	SNK2515C	SNK3015C	SNK3514C	SNK4013C	SNK4512C	SNK5014C	SNK5514C	SNK6015C	SNK6515C	SNK7014C	SNK7514C
α°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°
Bore chamfering	φ1.0～φ16.0mm	φ2.0～φ16.5mm	φ1.5～φ15.5mm	φ1.5～φ15.0mm	φ1.5～φ14.0mm	φ1.5～φ13.5mm	φ1.5～φ12.5mm	φ5.0～φ14.5mm	φ6.0～φ14.5mm	φ7.5～φ15.0mm	φ8.5～φ15.0mm	φ9.5～φ14.5mm	φ10.5～φ14.0mm

Small Diameter type!

- This tool was developed for Small Diameter processing
- You can choose angle 15 °～75 ° (with 5 °increments)
- Rich Inserts can be selected for various workpiese Processing



Corner chamfering



Body

Model. No.	Blades	Dimensions (mm)							α°
		φD	Minimum Processing diameter(φDs)	φd	L	ℓs	ℓn	S	
SNK1516C	1	18.0	0.5	20	125	95	30	2.1	15
SNK2016C	1	18.2	1.1	20	125	95	30	2.8	20
SNK2515C	1	17.0	0.6	20	125	95	30	3.5	25
SNK3015C	1	16.3	0.7	20	125	95	30	4.5	30
SNK3514C	1	15.5	0.7	20	125	95	30	5.2	35
SNK4013C	1	14.6	0.8	20	125	95	30	5.9	40
SNK4512C	1	13.5	0.9	20	125	95	30	6.4	45
SNK5014C	1	15.5	4.0	20	125	95	30	7.0	50
SNK5514C	1	15.2	5.0	20	125	95	30	7.5	55
SNK6015C	1	15.6	6.7	20	125	95	30	7.3	60
SNK6515C	1	15.5	8.0	20	125	95	30	8.4	65
SNK7014C	1	15.1	9.0	20	125	95	30	8.7	70
SNK7514C	1	14.5	10.0	20	125	95	30	9.0	75

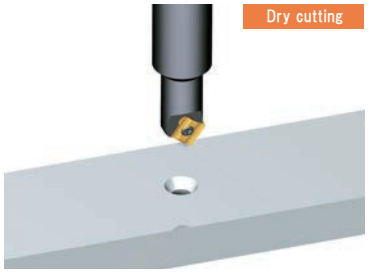
Processing Example

[φ7mm Bore chamfering]

- Body : SNK6015C
- Insert : C32GUX AC15D
  - Material·····SUS304
  - Rotation Speed···3,000r.p.m.
  - Cutting Speed····150mm/m
  - Depth of Cut·····Z-4.0
  - Cutting Oil·····Yes

Result

Good finish



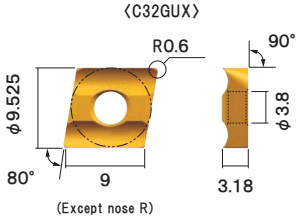
Cuttinng Conditions

Material	material Model	C32GUX									
		NK2001	NK1010	NK2020	NK3030	NK5050	NK6060	NK8080	AC15D	HSS	HSS TiN
	Feed per blade (fz)	Cutting speed (m / min)									
General Steel	0.08～0.2	200～250		150～200	150～200		150～200		150～200	13～23	15～25
Alloy Steel	0.08～0.2	200～250		150～200	150～200		150～200		150～200	10～20	13～22
Stainless Steel	0.08～0.2			120～180	150～200	120～180	150～200	150～200 ※SUS316	150～200	10～15	11～17
Aluminum,Resin,Brass	0.08～0.3		250～800			250～800		300～1,000		31～40	31～47
Castings	0.08～0.3	200～250 ※FCD									

- According to the shape of work, clamp condition and large or small chamfering amount, the cutting condition will have to be adjusted.
- Yellow marked condition is recommended for the material listed
- In case of chamfering process of Stainless steel, kindly take down cutting

Insert

Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
	C32GUX NK2001	Cermet	Honing edge	None	2	12
	C32GUX NK1010	Carbide K10	Sharp edge	None	2	12
	C32GUX NK2020	Carbide M20	Honing edge	None	2	12
	C32GUX NK3030	Carbide M20	Honing edge	TiN	2	12
	C32GUX NK5050	Carbide K10	Sharp edge	TiN	2	12
	C32GUX NK6060	Carbide M20	Honing edge	TiAℓN	2	12
	C32GUX NK8080	Carbide K10	Sharp edge	TiAℓN	2	12
	C32GUX AC15D	Fine particles Carbide	Honing edge	AlCrN	2	12
	NEW C32GUX AC25D	Fine particles Carbide	Sharp edge	AlCrN	2	12
	C32GUX HSS	HSS	Sharp edge	None	2	12
	C32GUX HSS TiN	HSS	Sharp edge	TiN	2	12

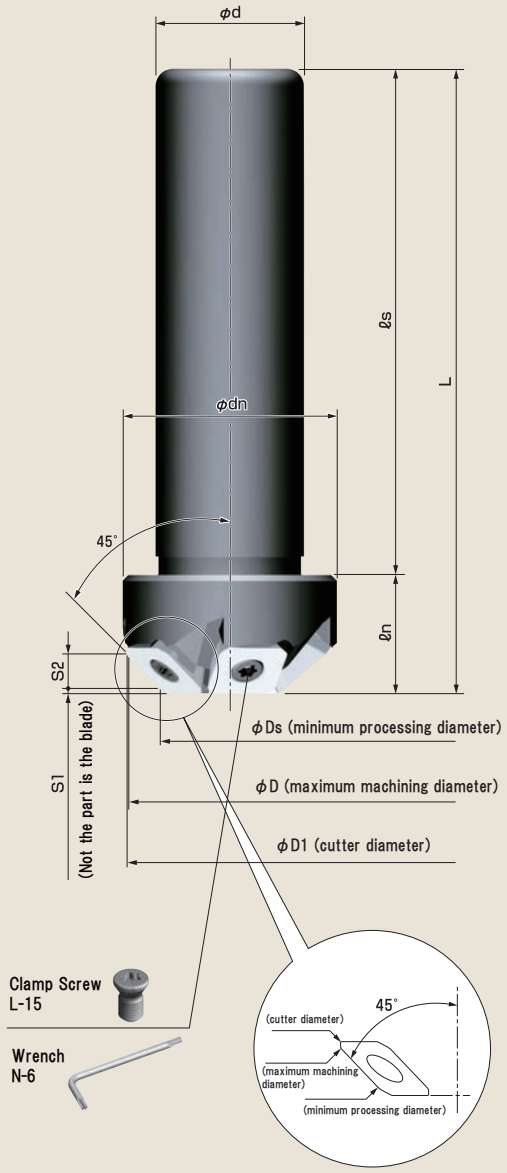


Kame Cutter

Corner Chamfering | 5Blade

Shortening working time!

● High Speed processing is ensured by the special shape tip



Corner Chamfering

Tip special shape

Body

Model. No.	Blades	Dimensions (mm)									
		φD	φD1	φDs	φd	φdn	L	ℓs	ℓn	S1	S2
KMC25-34S	5	34.9	36.4	24	25	36	105	85	20	1.2	5.3

※ Insert is not equipped as standard accessory. Please purchase it separately
※ Clamp screw is equipped as standard accessory

Cutting Conditions

Material	Rotation speed (r.p.m.)	Table feed	Recommended Insert	Coolant
General Steel	2,000～	2,000	S3H3MNZ NK2020	Yes
Alloy Steel	2,000～	2,000	S3H3MNZ NK2020	Yes
Stainless Steel	2,000～	500～1,000	S3H3MNZ AC15D	Yes
Aluminum,Resin,Brass	2,000～	2,000	S3H3GNZ NK1010	Yes
Castings	2,000～	2,000	S3H3GNZ NK1010	Yes

● In case of chamfering process of Stainless steel, kindly take down cutting

Processing Example

[C2 Chamfering]

- Body : KMC25-34S
- Insert : S3H3MNZ AC15D

● Material・・・・・・・・・SUS304
● Rotation Speed・・・5,000r.p.m
● Table feed・・・・・・・1,500mm/min
● Cutting Depth・・・・C2
● Cutting Oil・・・・・・・Yes

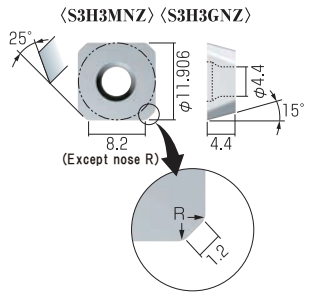
Wet Processing

Result

Good !
No secondary burrs and
No chattering after processing

Insert

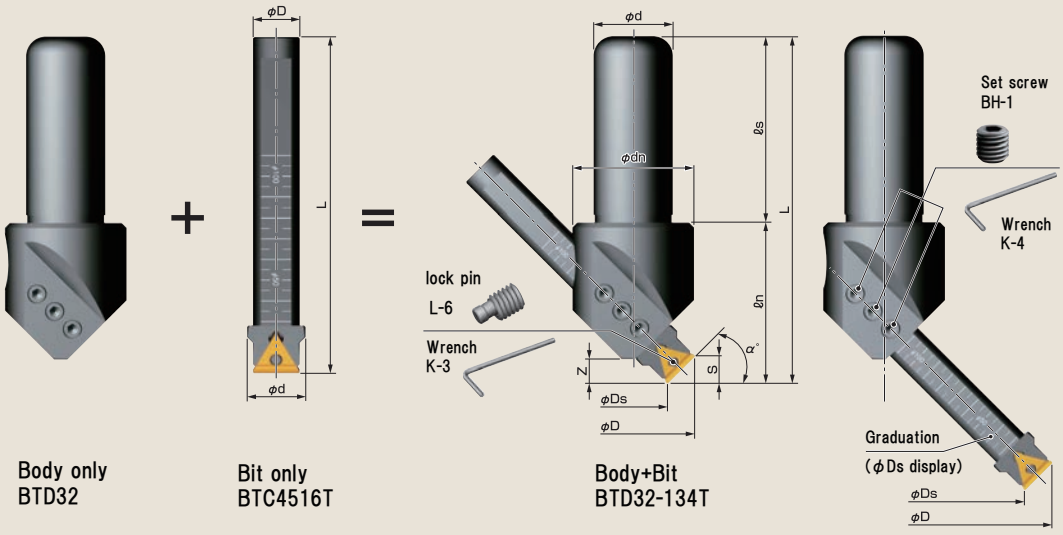
Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
⟨S3H3MNZ⟩ ⟨S3H3GNZ⟩	S3H3MNZ NK2001	Cermet	Honing edge	None	4	12
	S3H3GNZ NK1010	Carbide K10	Sharp edge	None	4	12
	S3H3MNZ NK2020	Carbide M20	Honing edge	None	4	12
	S3H3MNZ NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	S3H3GNZ NK9090	Carbide K10	Sharp edge	None	4	12
	S3H3MNZ AC15D	Fine particles Carbide	Honing edge	AlCrN	4	12



Baitender

Bit Type!

- Expansion Bit type for wide range chamfering !
- Bore Chamfering Capacity: φ28～φ133
- T32-type insert can be used



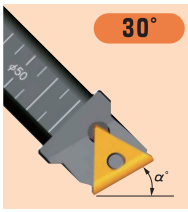
Body only BTD32 + Bit only BTC4516T = Body+Bit BTD32-134T

Model. No.	Blades	Dimensions (mm)									α°
		φD	φDs	φdn	φd	L	ℓs	ℓn	Z	S	
BTD32-134T	1	49.85 134.6	28 112.8	49	32	140 182.8	75	65 107.8	9.8 52.6	10.9	45°
BTD32				49	32	130.2	75	55.2			

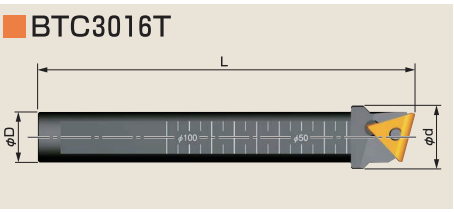
※ Inset is not supplied as standard accessory. Please order separately.
※ Lock Pin, set screw and wrench supplied as standard accessory

Model. No.	Dimensions (mm)		
	φD	φd	L
BTC4516T	16	20	115

Option Bit



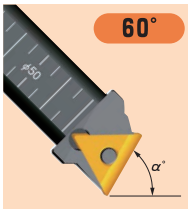
BTC3016T



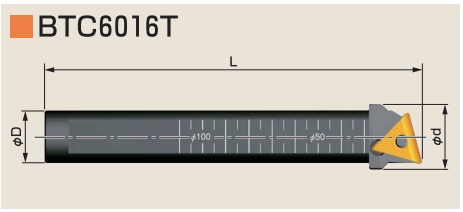
Model. No.	Dimensions (mm)		
	φD	φd	L
BTC3016T	16	20	119

BTC3016T(Option) is mounted

Blades	Dimensions (mm)									α°
	φD	φDs	φdn	φd	L	ℓs	ℓn	Z	S	
1	54.82 139.6	28 112.8	49	32	140 182.4	75	65 107.4	9.8 52.6	7.7	30°



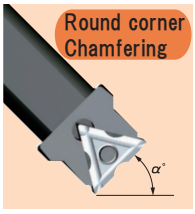
BTC6016T



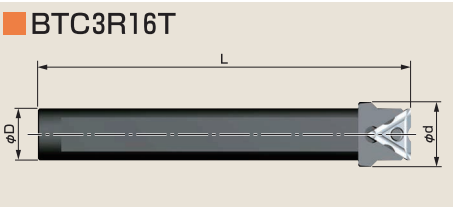
Model. No.	Dimensions (mm)		
	φD	φd	L
BTC6016T	16	20	115

BTC6016T(Option) is mounted

Blades	Dimensions (mm)									α°
	φD	φDs	φdn	φd	L	ℓs	ℓn	Z	S	
1	43.37 128.2	28 112.8	49	32	140 182.5	75	65 107.5	9.8 52.5	13.3	60°



BTC3R16T

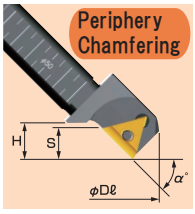


Estimated numeral setting
R1 X=18.95～61.32 Z=5.98
R2 X=18.43～60.80 Z=6.48
R3 X=17.93～60.30 Z=6.98
Regarding the X value, and is a reference value.

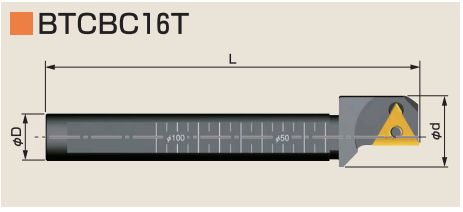
Model. No.	Dimensions (mm)		
	φD	φd	L
BTC3R16T	16	20	115

BTC3R16T(Option) is mounted

Blades	Dimensions (mm)									α°
	φD	φDs	φdn	φd	L	ℓs	ℓn	Z	S	
1	49.9 134.6	28 112.8	49	32	140 182.4	75	65 107.4	9.8 52.6	10.9	45°



BTCBC16T

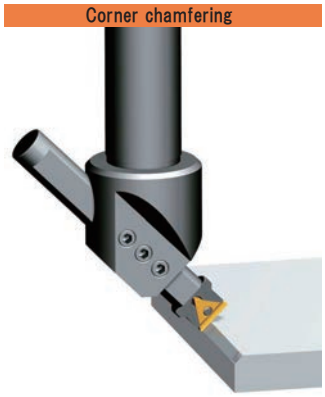


Model. No.	Dimensions (mm)		
	φD	φd	L
BTCBC16T	16	24	126

BTCBC16T(Option) is mounted

Blades	Dimensions (mm)											α°
	φD	φDs	φDℓ	φdn	φd	L	ℓs	ℓn	Z	H	S	
1	50.6 134.7	28 112.8	71.5 155.2	49	32	144 186.5	75	69 111.5	13.9 56.4	(12.9)	10.9	-45°

Corner chamfering



Bore chamfering

Processing Example

[φ50 Bore chamfering (C5)]

- Body : BTD32-134T
- Insert : TT32GUR NK2001
  - Material・・・・・・・・S45C
  - Rotation Speed・・400r.p.m
  - Table feed・・・・・・24/min
  - Cuting Depth・・・・C5
  - Cutting Oil・・・・・・None

Result

Good!
No secondary burrs and
No chattering after processing

Cutting Conditions

T32MOR

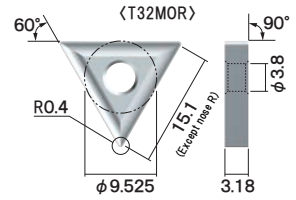
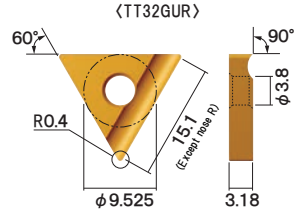
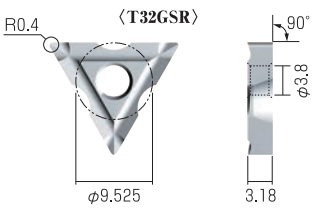
Material	Material Model / Feed per blade (fz)	NK2001	NK1010	NK2020	NK3030	NK6060
		Cutting speed (m / min)				
General Steel	0.08～0.2	200～250		150～200	150～200	
Alloy Steel	0.08～0.2	200～250		150～200	150～200	
Stainless Steel	0.08～0.2			100～150	100～150	100～150
Aluminum,Resin,Brass						
Castings	0.08～0.2	200～250 ※FCD cutting the time	100～150			

TT32GUR

Material	Feed per blade (fz)	NK2001	NK1010	NK2020	NK3030	NK5050	NK6060	NK8080	AC15N	HSS	HSS TiN
		Cutting speed (m / min)									
General Steel	0.08～0.2	200～250		150～200	150～200		150～200		150～200	13～23	15～25
Alloy Steel	0.08～0.2	200～250		150～200	150～200		150～200		150～200	10～20	13～22
Stainless Steel	0.08～0.2			120～180	150～200	120～180	150～200	150～200 (SUS316)	150～200	10～15	11～17
Aluminum,Resin,Brass	0.08～0.3		250～800			250～800		300～1,000		31～40	31～47
Castings	0.08～0.3	200～250 (FCD)									

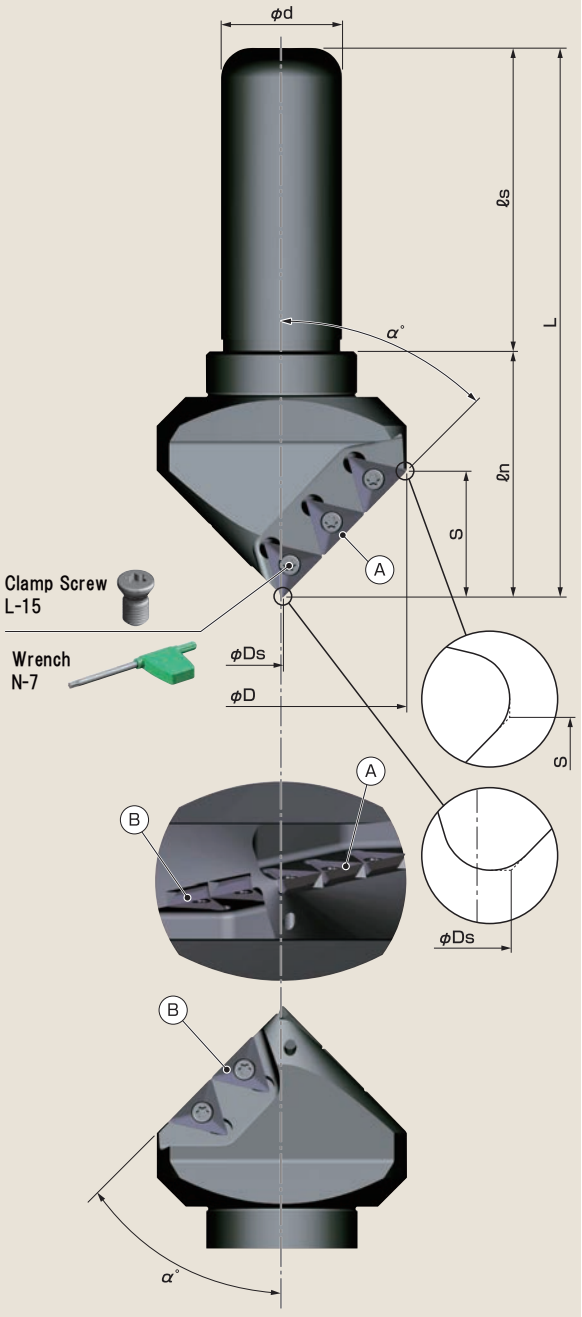
- According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
  In case of process with large amount chamfer, please reduce cutting condition
- Yellow marked condition is recommended for the material listed
- In case of chamfering process of Stainless steel, kindly take down cutting
- For Bore Chamfering, please reduce the cutting condition to 1/3

Insert

Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
<T32MOR> 	T32MOR NK2001	Cermet	Honing edge	None	6	12
	T32MOR NK1010	Carbide K10	Sharp edge	None	6	12
	T32MOR NK2020	Carbide M20	Honing edge	None	6	12
	T32MOR NK3030	Carbide M20	Honing edge	TiN	6	12
	T32MOR NK6060	Carbide M20	Honing edge	TiAℓN	6	12
<TT32GUR> 	TT32GUR NK2001	Cermet	Honing edge	None	2	12
	TT32GUR NK1010	Carbide K10	Sharp edge	None	2	12
	TT32GUR NK2020	Carbide M20	Honing edge	None	2	12
	TT32GUR NK3030	Carbide M20	Honing edge	TiN	2	12
	TT32GUR NK5050	Carbide K10	Sharp edge	TiN	2	12
	TT32GUR NK6060	Carbide M20	Honing edge	TiAℓN	2	12
	TT32GUR NK8080	Carbide K10	Sharp edge	TiAℓN	2	12
	TT32GUR AC15N	Fine particles Carbide	Honing edge	AlCrN	2	12
	TT32GUR HSS	HSS	Sharp edge	None	2	12
	TT32GUR HSS TiN	HSS	Sharp edge	TiN	2	12
<T32GSR> 	T32GSR-1R NK2020	Carbide M20		None	3	3
	T32GSR-2R NK2020	Carbide M20		None	3	3
	T32GSR-3R NK2020	Carbide M20		None	3	3

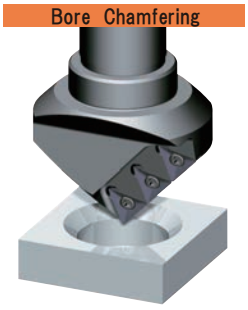
Various sizes

● Bore Chamfering process from φ1.0mm～φ81.4mm is possible !



⚠ B1・B2 is an auxiliary blade.
Cutting conditions, please be calculated with a single blade.

Bore Chamfering



Model. No.	Capacity
	Bore chamfering
TYOU4567T	φ1.2mm～φ66.6mm
TYOU6066T	φ20.4mm～φ66.8mm
TYOU3082T	φ1.0mm～φ81.4mm

※ we recommend the 10C below for chamfering amount. (mm)

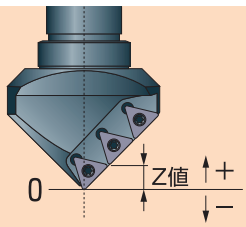
Model. No.	⚠ Remaining stage(step) Range
TYOU4567T	(φ21.63～φ23.76) and (φ44.15～φ46.27)
TYOU6066T	(φ34.93～φ36.02) and (φ50.95～φ52.04)
TYOU3082T	(φ26.59～φ28.46) and (φ54.33～φ56.20)

(mm)

Body

Model. No.	Blades	Dimensions (mm)							α°
		φD	φDs	φd	L	ℓs	ℓn	S	
TYOU4567T	5	67.0	0.88	32	145	80	65	33.1	45°
NEW TYOU6066T	5	67.0	20.0	32	155	80	75	40.7	30°
NEW TYOU3082T	5	82.1	0.71	32	145	80	65	23.5	60°

※ Inset is not equipped as standard accessory. Please purchase it separately.
※ Clamp screw is equipped as standard accessory



Z-value compensate standard

※ Please note that this value may be getting little errors

α°=30° → +17. 32
α°=45° → +0. 44
α°=60° → +0. 20

[Example]
In case of φ5mm Centering process at α°= 45°
Correct Z-value (-2.5)to -2.06

Cutting Conditions

Material	Material Model	ZA10N	AC15N
	Feed per blade (fz)	Cutting speed (m / min)	
General Steel	0.05～0.1		20～50
Alloy Steel	0.05～0.1		20～50
Stainless Steel	0.05～0.1		20～50
Aluminum,Resin,Brass	0.05～0.1	40～100	
Castings	0.05～0.1	20～50	

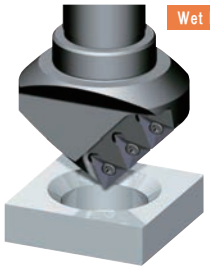
● According to the shape of work, clamp condition and large or small chamfering amount, the cutting condition will have to be adjusted.
● Yellow marked condition is recommended for the material listed
● In case of chamfering process of Stainless steel, kindly take down cutting

Processing Example

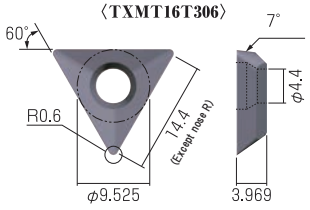
[φ25 C10 Bore Chamfering]
■ Body : TYOU4567T
■ Insert : TXMT16T306
● Material・・・・・・・・・SUS304
● Rotation Speed・・・320r.p.m.
● Feed (Z-axis) ・・・・19.2/min
● Cutting Depth・・・・C10
● Cutting Oil・・・・・・・Yes

Result
Good!
No secondary burrs and
No chattering after processing

Wet Processing



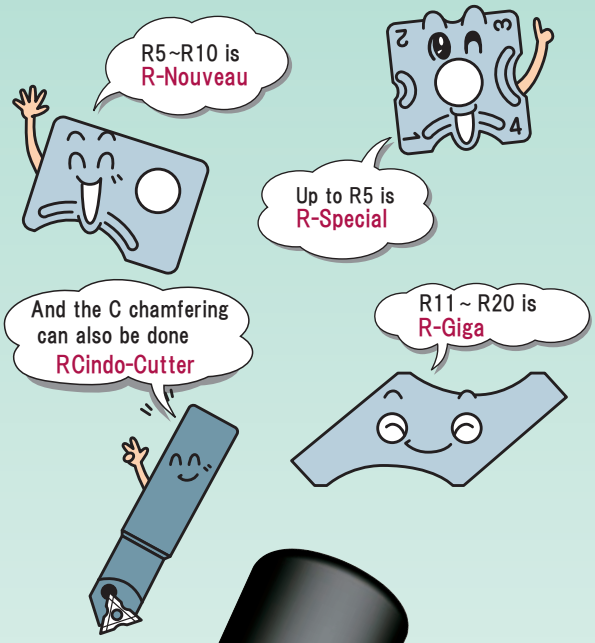
Insert

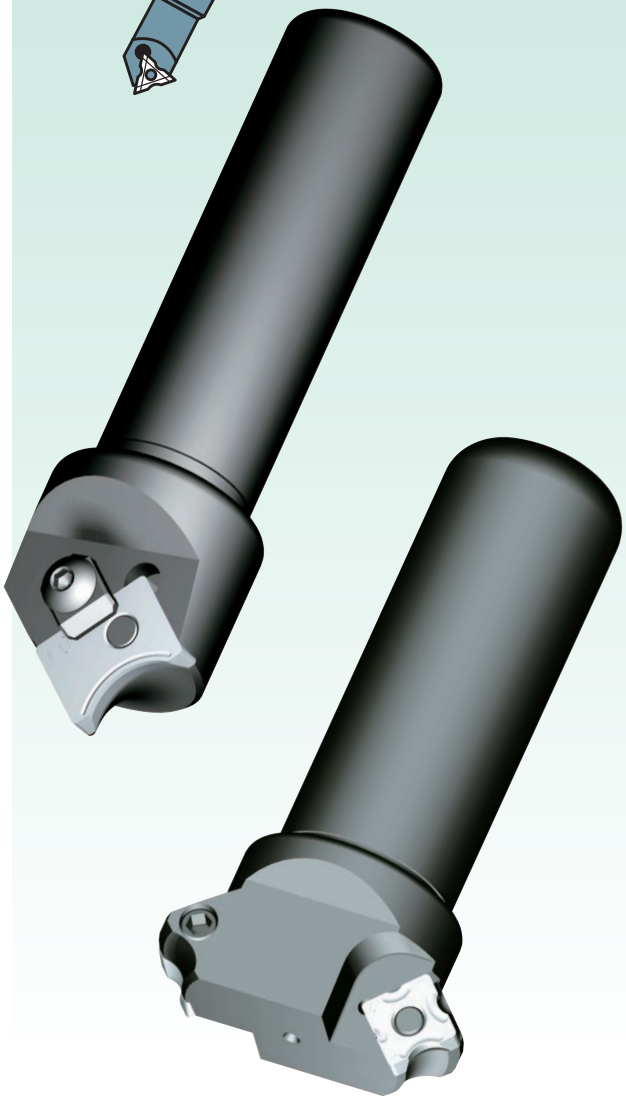
Figure	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
	TXMT16T306 ZA10N	Carbide K10	Sharp edge	None	3	12
	TXMT16T306 AC15N	Fine particles Carbide	Honing edge	AlCrN	3	12

R-Special Jr./R-Special/R-Nouveau Jr./R-Nouveau/RCindo-Cutter/R-Giga

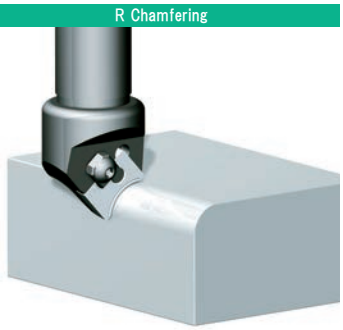
Easy Radius change !!

● Various Radius chamfering can be made by just exchanging Inserts

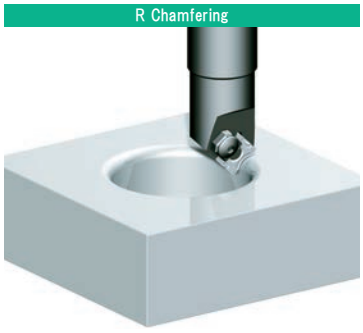




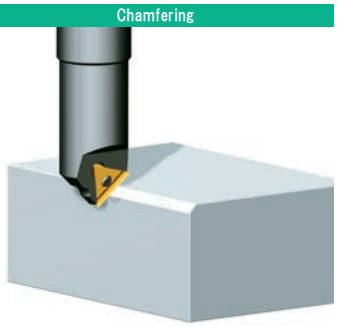
R Chamfering

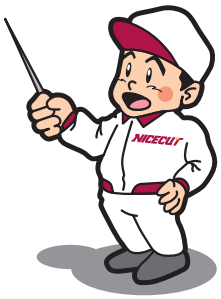


R Chamfering



Chamfering





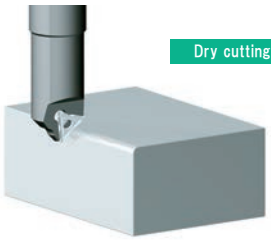
Processing Example (RCindo-Cutter)

[Periphery R3 Chamfering process]

- Body: CR25-05T
- Insert: T32GSR-3R NK2020
  - Material ..... Bakelite
  - Rotational speed ..... 4,000r.p.m.
  - Table feed ..... 800 / min

Result

Good discharge of chips, surface accuracy also good Results came out.



Processing Example (R-Special Jr.)

[R5 Chamfering process of ϕ20 hole Result]

- Body: NK25-05R
- Insert: N43GXR-5R NK2020
  - Material S45C
  - Rotational speed ..... 2,500r.p.m.
  - Table feed 400/min

Result

Surface Accuracy is good when the processing was made without rough cutting

Processing Example (R-Nouveau Jr.)

[Periphery R10 Chamfering process]

- Body: NK25-10R
- Insert: N54GCR-10R NK2020
  - Material ..... Aluminum
  - Rotational speed ..... 4,000r.p.m.
  - Table feed 800/min

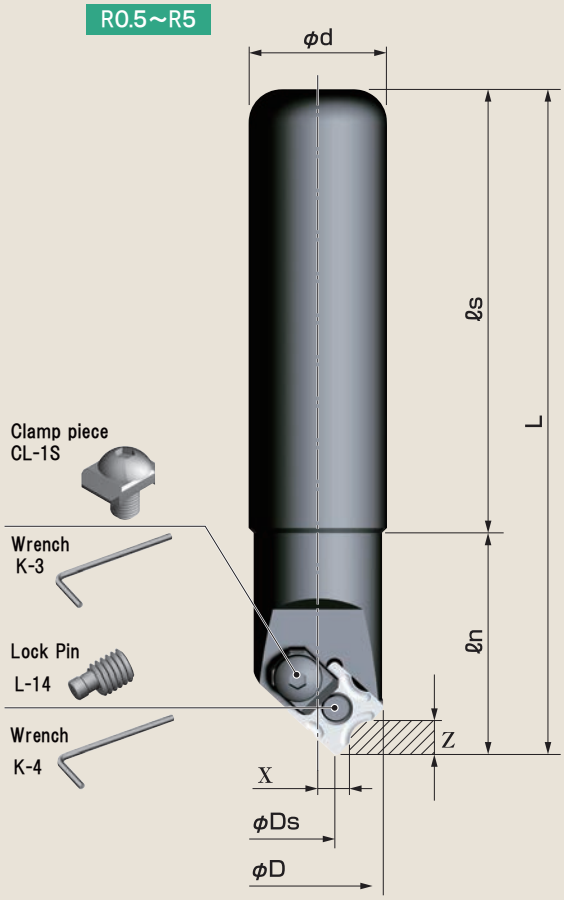
Result

Surface Accuracy is good when the processing was made without rough cutting

⚠ When mounting inserts, please do not take reverse tightening !
Poor accuracy or breakage of insert may be occurred due to the Eccentricity looking mechanism

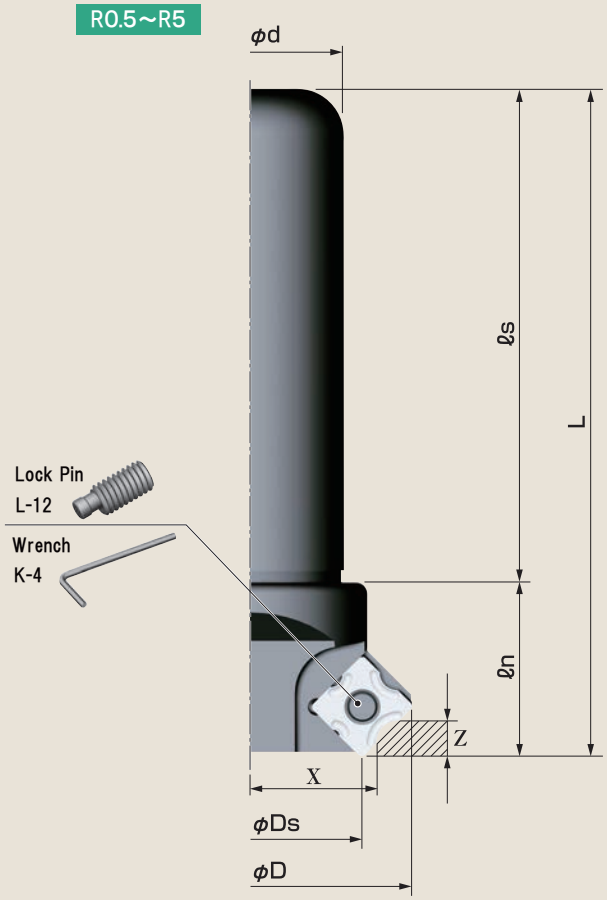
1 R-Special Jr. 1Blade

R0.5~R5



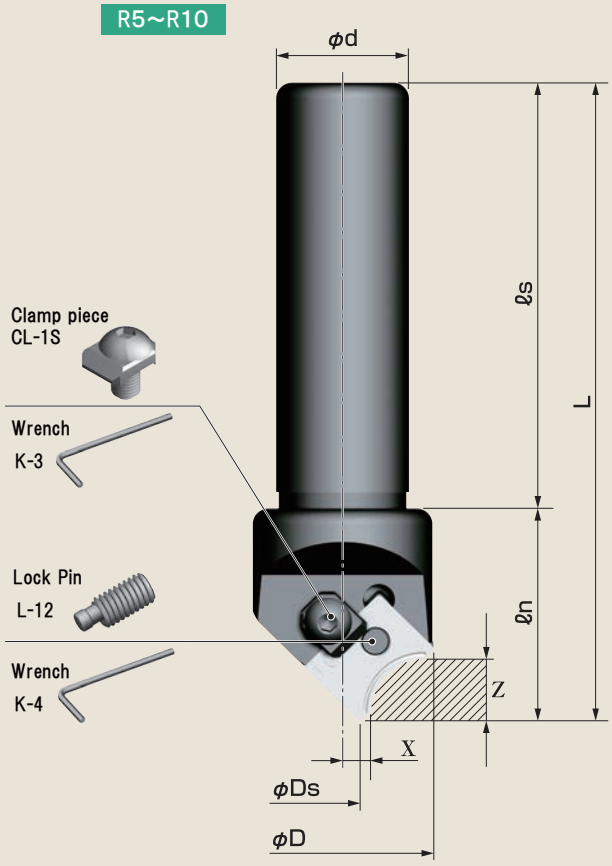
2 R-Special 3Blade

R0.5~R5



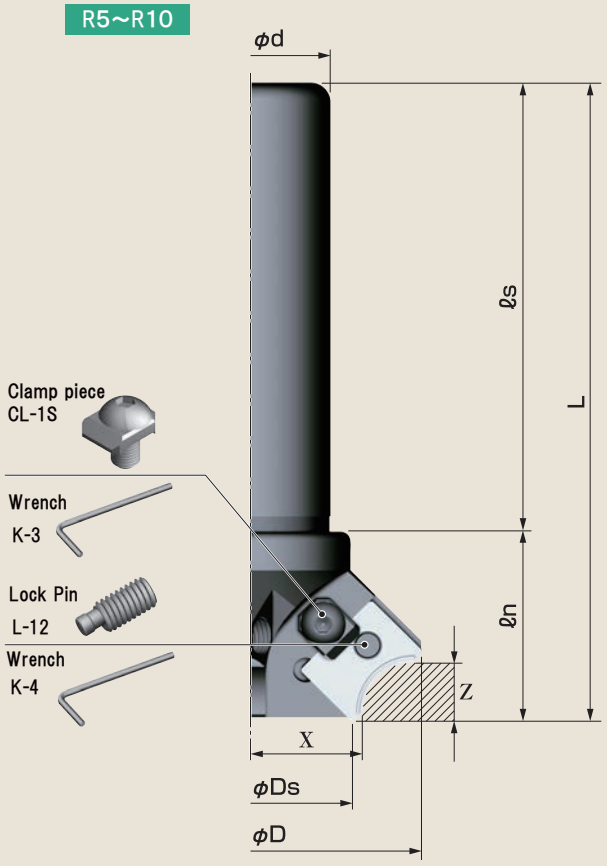
3 R-Nouveau Jr. 1Blade

R5~R10



4 R-Nouveau 3Blade

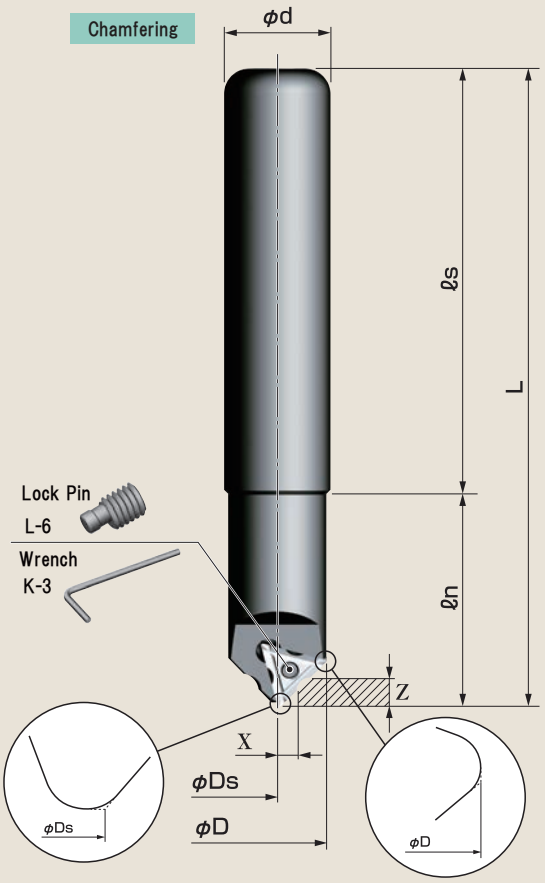
R5~R10



5 RCindo-Cutter 1Blade

R1～R3

Chamfering



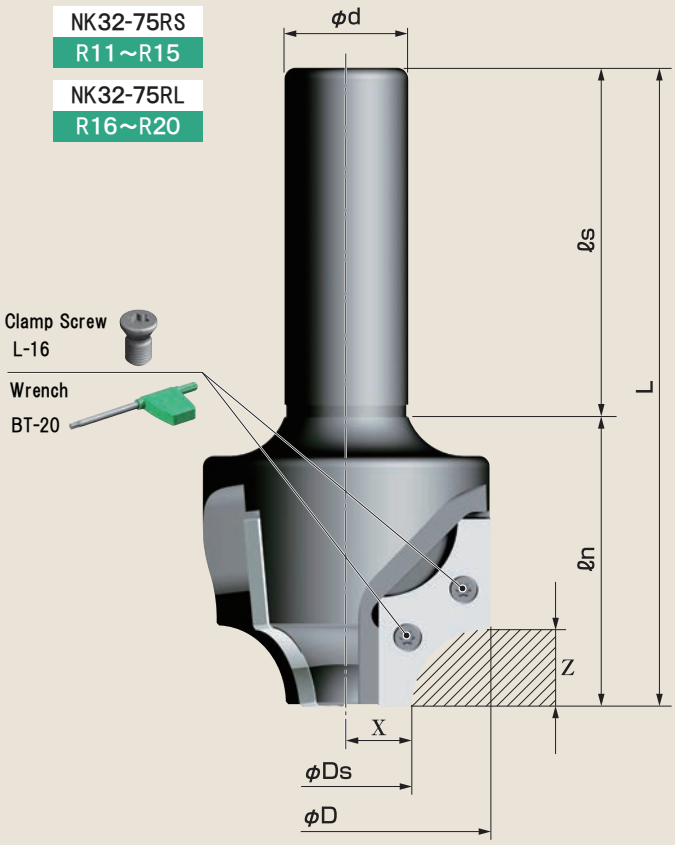
6 R-Giga

3Blade

This is not standard production model.
Please check the delivery time when ordering

NK32-75RS
R11～R15

NK32-75RL
R16～R20



Body

Product name	Model No.	Fig.	Blades	Dimensions (mm) φD	φDs	φd	L	ℓs	ℓn	Inserts
R-Special Jr.	NK20-05R	1	1	25	8.4	20	120	80	40	N43GXR
	NK25-05R	1	1	25	8.4	25	120	80	40	N43GXR
R-Special	NK20-40R-3	2	3	56	39.3	20	115	85	30	N43GXR
	NK25-40R-3	2	3	56	39.3	25	115	85	30	N43GXR
	NK32-40R-3	2	3	56	39.3	32	115	85	30	N43GXR
R-Nouveau Jr.	NK20-10R	3	1	35.4	8.9	20	120	80	40	N54GCR
	NK25-10R	3	1	35.4	8.9	25	120	80	40	N54GCR
R-Nouveau	NK25-70R	4	3	69.2	42.3	25	130	90	40	N54GCR
	NK32-70R	4	3	69.2	42.3	32	130	90	40	N54GCR
	NK32-70RL	4	3	69.2	42.3	32	200	150	50	N54GCR
RCindo-Cutter	CR25-05T	5	1	25	3.8	25	150	100	50	T32GSR / T32MOR / TT32GUR
R-Giga	NK32-75RS	6	3	75.5	35	32	165	90	75	XNEW3004-11R～15R
	NK32-75RL	6	3	75 5	35	32	165	90	75	XNEW3004 16R～20R

※ Inset is not supplied as standard accessory. Please order separately.
※ Clamp screw, look pin and wrench are supplied as standard accessory.

⚠ When mounting insert, please do not take reverse tightening.
Due to the eccentricity looking mechanism ,poor accuracy or breakage of insert may be occurred
When replacing insert, please confirm twhether you have been taking reserve tightening or not.

Cutting conditions to P.37
Insert details to P.38

R-Special Jr./R-Special/R-Nouveau Jr./R-Nouveau/RCindo-Cutter/R-Giga

※ Please refer to P.18. on C chamfering cutting condition

Cuttinng Conditions

R-Special Jr./R-Special						R-Nouveau Jr./R-Nouveau			RCindo-Cutter		R-Giga	
N43GXR						N54GCR			T32GSR		XNEW3004	
Material	Material Model	NK2001	NK1010	NK2020	NK6060	Material Model	NK2020	NK6060	Material Model	NK2020	Material Model	NK2020
	Feed Per Blade (fz)	Cutting speed (m / min)				Feed Per Blade (fz)	Cutting Speed (m / min)		Feed Per Blade (fz)	Cutting speed (m / min)	Feed Per Blade (fz)	Cutting Speed (m / min)
General Steel	0.1～0.2	100～250		100～200		0.1～0.3	100～250		0.08～0.2	150～200	0.1～0.3	100～250
Alloy Steel	0.1～0.2	100～250		100～200	150～200	0.1～0.3	100～250	150～250	0.08～0.2	150～200	0.1～0.3	100～250
Stainless Steel	0.1～0.2			80～160	150～200	0.1～0.25	80～160	150～250	0.08～0.2	120～180	0.1～0.25	80～160
Aluminum,Resin,Brass	0.1～0.3		150～300	150～300		0.1～0.3	150～400		0.08～0.3	200～800	0.1～0.3	150～400
Castings	0.1～0.3	80～150 ※FCD	80～150	80～150		0.1～0.3	80～200		0.08～0.2	150～200	0.1～0.3	80～200

- According to the shape of work, clamp condition and large or small chamfering amount, the cutting condition will have to be adjusted.
- Yellow marked condition is recommended for the material listed
- In case of chamfering process of Stainless steel, kindly take down cutting

X-axis ・ Z-axis position

Example: In the case of R Nouveau Jr.

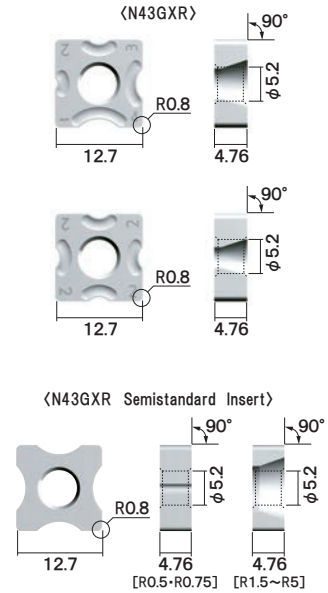
Setting numerical values

Product name	Processing R	X-axis position (mm)	Z-axis position (mm)
R-Special Jr.	R0.5	8.05	4.42
	R0.75	7.93	4.55
	R1	7.80	4.67
	R1.5	7.55	4.92
	R2	7.30	5.17
	R2.5	7.06	5.42
	R3	6.81	5.67
	R3.5	6.56	5.91
	R4	6.31	6.16
	R4.5	6.06	6.41
	R5	5.82	6.66
R-Special	R0.5	23.54	4.42
	R0.75	23.42	4.54
	R1	23.29	4.66
	R1.5	23.04	4.91
	R2	22.79	5.16
	R2.5	22.54	5.41
	R3	22.29	5.66
	R3.5	22.04	5.91
	R4	21.78	6.16
	R4.5	21.53	6.41
	R5	21.28	6.65
R-Nouveau Jr.	R5	6.00	6.70
	R6	5.41	7.21
	R7	5.64	8.42
	R8	6.00	9.65
	R9	5.41	10.16
	R10	6.00	11.62
R-Nouveau	R5	22.80	6.80
	R6	22.25	7.32
	R7	22.49	8.56
	R8	22.80	9.80
	R9	22.25	10.32
	R10	22.80	11.80
RCindo-Cutter	R1	6.40	5.81
	R2	5.90	6.30
	R3	5.40	6.78
R-Giga	R11	17.50	11.77
	R12	17.50	12.70
	R13	17.50	13.63
	R14	17.50	14.56
	R15	17.50	15.48
	R16	17.50	16.41
	R17	17.50	17.34
	R18	17.50	18.27
	R19	17.50	19.20
	R20	17.50	20.12

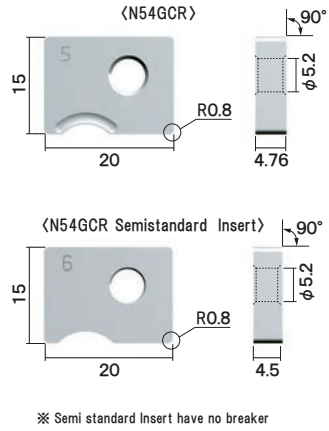
- numeric value might get some errors, please acknowledge.

Insert ※ Please refer to P-18 on C Chamfering cutting condition

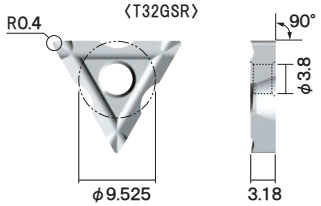
Figure		Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
● R-Special Jr./R-Special/R-Bit Ryanmencut-R(RR25-48N)		N43GXR NK2001	Cermet	R1・2・3・4	None	4	3/12
		N43GXR NK1010	Carbide K10	R1・2・3・4	None	4	3/12
		N43GXR NK2020	Carbide M20	R1・2・3・4	None	4	3/12
		N43GXR NK6060	Carbide M20	R1・2・3・4	TiAℓN	4	3/12
		N43GXR-1R NK2001	Cermet	The Same R Each corner	None	4	3/12
		N43GXR-2R NK2001	Cermet	The Same R Each corner	None	4	3/12
		N43GXR-3R NK2001	Cermet	The Same R Each corner	None	4	3/12
		N43GXR-4R NK2001	Cermet	The Same R Each corner	None	4	3/12
		N43GXR-1R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
		N43GXR-2R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
		N43GXR-3R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
		N43GXR-4R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
		N43GXR-1R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
		N43GXR-2R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
		N43GXR-3R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
		N43GXR-4R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
	Semistandard	N43GXR-0.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semistandard	N43GXR-0.75R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semistandard	N43GXR-1.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semistandard	N43GXR-2.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semistandard	N43GXR-3.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semistandard	N43GXR-4.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semistandard	N43GXR-5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
● R-Nouveau/R-Nouveau Jr./10R-bit		N54GCR-5R NK2020	Carbide M20		None	1	3
		N54GCR-8R NK2020	Carbide M20		None	1	3
		N54GCR-10R NK2020	Carbide M20		None	1	3
		N54GCR-5R NK6060	Carbide M20		TiAℓN	1	3
		N54GCR-8R NK6060	Carbide M20		TiAℓN	1	3
		N54GCR-10R NK6060	Carbide M20		TiAℓN	1	3
	Semistandard	N54GCR-6R NK2020	Carbide M20		None	1	3
	Semistandard	N54GCR-7R NK2020	Carbide M20		None	1	3
	Semistandard	N54GCR-9R NK2020	Carbide M20		None	1	3
●RCindo-Cutter		T32GSR-1R NK2020	Carbide M20		None	3	3
		T32GSR-2R NK2020	Carbide M20		None	3	3
		T32GSR-3R NK2020	Carbide M20		None	3	3
●R-Giga		XNEW3004-11R NK2020	Carbide M20	Honing edge	None	2	3
		XNEW3004-12R NK2020	Carbide M20	Honing edge	None	2	3
		XNEW3004-13R NK2020	Carbide M20	Honing edge	None	2	3
		XNEW3004-14R NK2020	Carbide M20	Honing edge	None	2	3
		XNEW3004-15R NK2020	Carbide M20	Honing edge	None	2	3
		XNEW3004-16R NK2020	Carbide M20	Honing edge	None	2	3
		XNEW3004-17R NK2020	Carbide M20	Honing edge	None	2	3
		XNEW3004-18R NK2020	Carbide M20	Honing edge	None	2	3
		XNEW3004-19R NK2020	Carbide M20	Honing edge	None	2	3
		XNEW3004-20R NK2020	Carbide M20	Honing edge	None	2	3

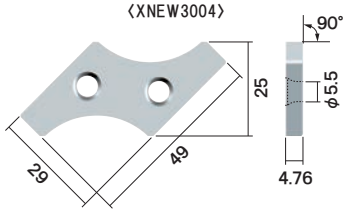


※ R0.5～R3.5 insert can be used for R Bit
※ Semi standard Insert have no breaker



※ Semi standard Insert have no breaker



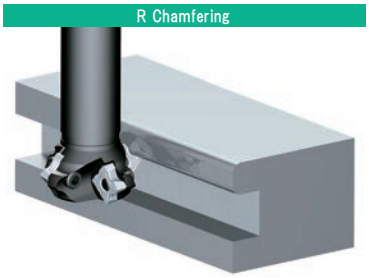


Ryanmencut-R / Mini-R

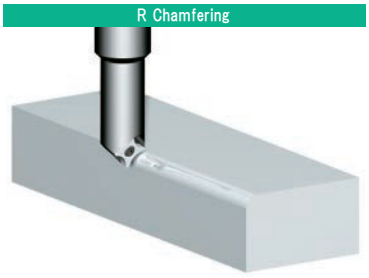
Possible Front/Reverse R-Chamfering and C-Chamfering process !

- Reverse and Front Chamfering process ensured by changing insert
  ※ Mini R is for front only
- 8 corners of inserts can be usable.
  ※ RR25-48N is 4 corners only

R Chamfering

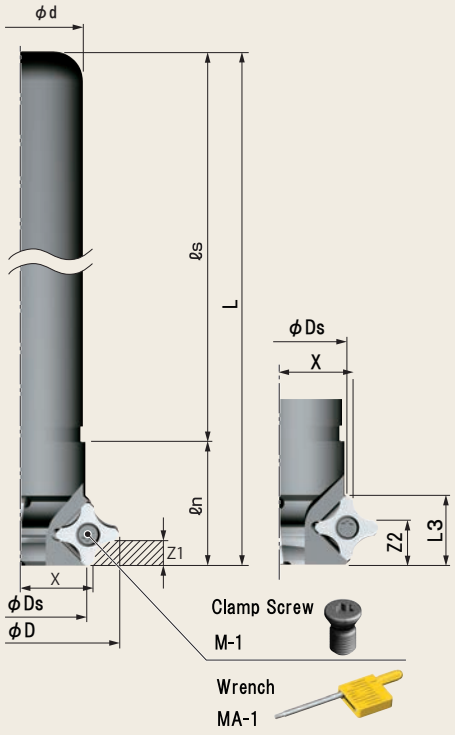


R Chamfering



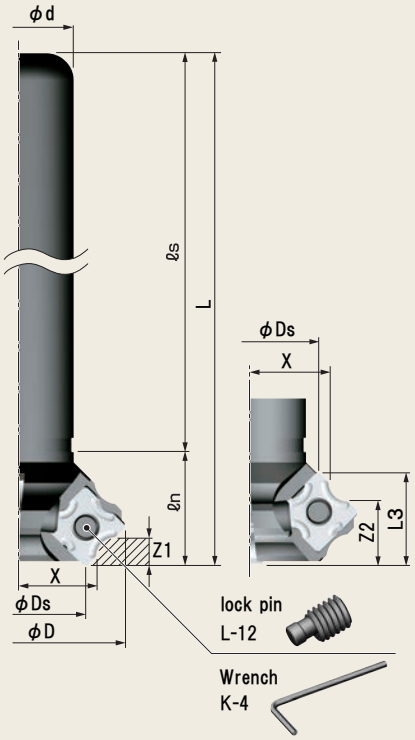
1 Ryanmencut-R (RR16-30S/RR25-40S) 2Blade 4Blade

R1～R5



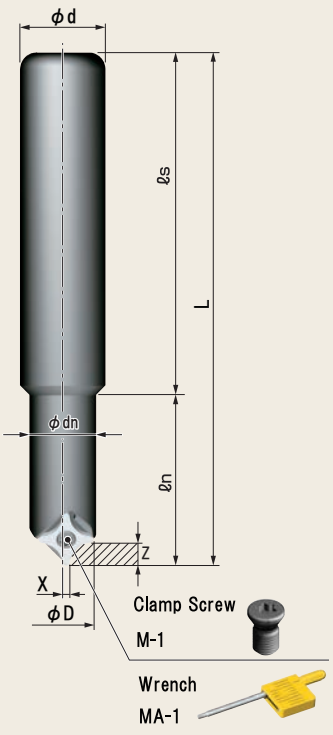
2 Ryanmencut-R (RR25-48N) 4Blade

R0.5～R5



3 Mini-R 1Blade

R1～R5



Body

Product Name	Model. No.	Fig.	blades	Dimensions (mm)								Inserts
				ϕD	ϕDs	ϕd	ϕdn	L	ℓs	ℓn	L3	
Ryanmencut-R	RR16-30S-4R	1	2	30	17.9	16		200	175	25	16	SNEQ090308 / S32MOZ / S32GUR
	RR16-30S-5R	1	2	30	17.9	16		200	175	25	16	SNEQ090308 / S32MOZ / S32GUR
	RR25-40S-4R	1	4	40	27.8	25		200	175	25	16	SNEQ090308 / S32MOZ / S32GUR
	RR25-40S-5R	1	4	40	27.8	25		200	175	25	16	SNEQ090308 / S32MOZ / S32GUR
	RR25-48N	2	4	48	31.3	25		200	175	25	20.5	N43GXR / N43MOZ / N43GUR
Mini-R	MR20-16S	3	1	16		20	15.6	120	80	40		SNEQ090308 / S32MOZ / S32GUR

※ Insert is not supplied as standard accessory. Please order spearately.
※ Lock pin, clamp screw, and wrench are supplied standard accessories

SNEQ090308- □ The RM, Please use.
SNEQ090308- □ RY, You can not use.

Cutting Conditions

Ryanmencut-R(RR16-30S･RR25-40S)/ Mini-R
SNEQ090308 / S32MOZ / S32GUR

Material	Feed per blade (fz)	Cutting speed (m/min)
General Steel	0.05～0.2	100～150
Alloy Steel	0.05～0.2	100～150
Stainless Steel	0.05～0.2	80～120
Aluminum,Resin,Brass	0.08～0.25	150～400
Cast Steel	0.05～0.2	100～150

Ryanmencut-R(RR25-48N)
N43GXR / N43MOZ / N43GUR

Material	Material Model	NK2001	NK1010	NK2020	NK6060
	Feed per blade (fz)	Cutting speed (m/min)			
General Steel	0.1～0.2	100～250		100～200	
Alloy Steel	0.1～0.2	100～250		100～200	150～200
Stainless Steel	0.1～0.2			80～160	150～200
Aluminum,Resin,Brass	0.1～0.3		150～300	150～300	
Cast Steel	0.1～0.3	80～150 ※FCD	80～150	80～150	

- According to the shape, clamp condition and volume of chamfering amount the above cutting condition will have to be adjusted. For large amount chamfering, the rate will have to be reduced
- For Stainless steel processing, please take down cut

Setting numerical values

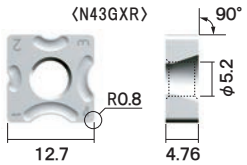
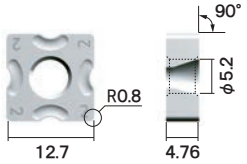
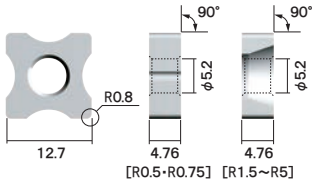
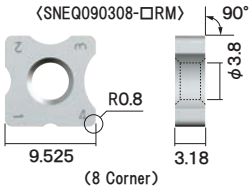
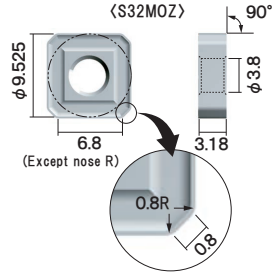
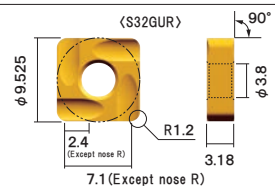
Ryanmencut-R(RR16-30S・RR25-40S)/ Mini-R									
		RR16-30S			RR25-40S			MR20-16S	
Model.No.	Processing R	X-axis position (mm)	Z1-axis position (mm)	Z2-axis position (mm)	X-axis position (mm)	Z1-axis position (mm)	Z2-axis position (mm)	X-axis position (mm)	Z-axis position (mm)
SNEQ090308-1RM	1R	11.44	3.55	12.45	16.42	3.55	12.45	4.46	3.46
SNEQ090308-2RM	2R	10.94	4.04	11.96	15.92	4.04	11.96	3.99	3.94
SNEQ090308-3RM	3R	10.45	4.54	11.46	15.42	4.54	11.46	3.53	4.43
SNEQ090308-4RM	4R	9.95	5.04	10.96	14.92	5.04	10.96	3.09	4.91
SNEQ090308-5RM	5R	9.46	5.50	10.5	14.42	5.5	10.5	2.67	5.40
SNEQ090308-XRM	1・2・3・4R	See above	See above	See above	See above	See above	See above	Can not be used	Can not be used

● Numeric value might get some errors, please acknowledge.

Ryanmencut-R(RR25-48N)			
RR25-48N			
Processing R	X-axis position (mm)	Z1-axis position (mm)	Z2-axis position (mm)
R0.5	19.55	4.42	16.08
R0.75	19.42	4.54	15.96
R1	19.30	4.66	15.84
R1.5	19.05	4.91	15.59
R2	18.80	5.16	15.34
R2.5	18.55	5.41	15.09
R3	18.29	5.66	14.84
R3.5	18.04	5.91	14.59
R4	17.79	6.16	14.34
R4.5	17.54	6.41	14.09
R5	17.29	6.65	13.85

Insert

Ryanmencut-R(RR16-30S・RR25-40S)/ Mini-R

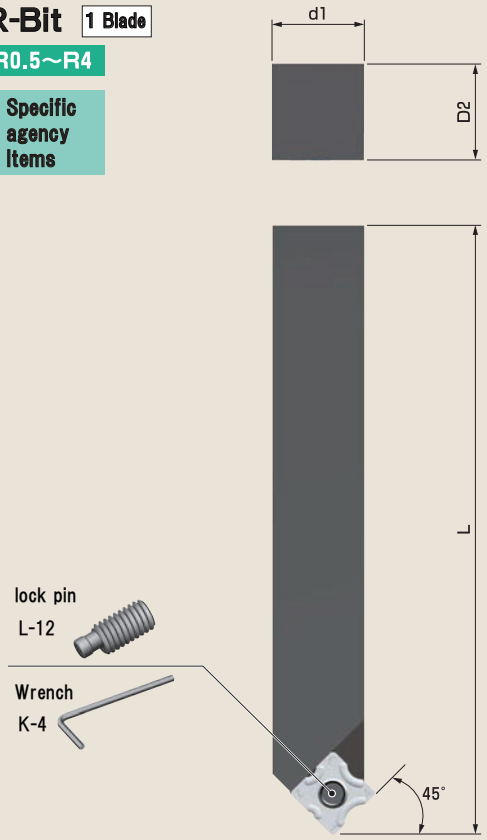
Fig.	Model.No.	Material	Blade Shape	Coating	Use Corner Number	Number 1 Case Input
●Ryanmencut-R(RR25-48N) 〈N43GXR〉   〈N43GXR Semistandard Insert〉  ※ R0.5～R3.5 insert can be used for R Bit ※ Semi standard Insert have no breaker	N43GXR NK2001	Cermet	R1・2・3・4	None	4	3/12
	N43GXR NK1010	Carbide K10	R1・2・3・4	None	4	3/12
	N43GXR NK2020	Carbide M20	R1・2・3・4	None	4	3/12
	N43GXR NK6060	Carbide M20	R1・2・3・4	TiAℓN	4	3/12
	N43GXR-1R NK2001	Cermet	The Same R Each corner	None	4	3/12
	N43GXR-2R NK2001	Cermet	The Same R Each corner	None	4	3/12
	N43GXR-3R NK2001	Cermet	The Same R Each corner	None	4	3/12
	N43GXR-4R NK2001	Cermet	The Same R Each corner	None	4	3/12
	N43GXR-1R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	N43GXR-2R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	N43GXR-3R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	N43GXR-4R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	N43GXR-1R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
	N43GXR-2R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
	N43GXR-3R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
	N43GXR-4R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
	Semi Standard N43GXR-0.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semi Standard N43GXR-0.75R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semi Standard N43GXR-1.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semi Standard N43GXR-2.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semi Standard N43GXR-3.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semi Standard N43GXR-4.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	Semi Standard N43GXR-5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
●Ryanmencut-R(RR16-30S・RR25-40S) ●Mini-R ※ XRM Can not be used 〈SNEQ090308-□RM〉  (8 Corner)	SNEQ090308-1RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-2RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-3RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-4RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-5RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-XRM ZA20N ※ can not be used to mini-R.	Carbide M20	R1・2・3・4	None	8	12
●Ryanmencut-R(RR16-30S・RR25-40S) ●Mini-R 〈S32MOZ〉  	S32MOZ NK2001	Cermet	Honing edge	None	8	12
	S32MOZ NK2050	Cermet	Honing edge	None	8	12
	NEW S32MOZ AB01F	Cermet	Honing edge	AlCrN	8	12
	S32MOZ NK1010	Carbide K10	Sharp edge	None	8	12
	S32MOZ NK2020	Carbide M20	Honing edge	None	8	12
	S32MOZ NK3030	Carbide M20	Honing edge	TiN	8	12
	S32MOZ NK6060	Carbide M20	Honing edge	TiAℓN	8	12
	S32MOZ AC15T	Fine particles Carbide	Honing edge	AlCrN	8	12
〈S32GUR〉  	S32GUR NK2001	Cermet	Honing edge	None	8	12
	S32GUR NK1010	Carbide K10	Sharp edge	None	8	12
	S32GUR NK2020	Carbide M20	Honing edge	None	8	12
	S32GUR NK3030	Carbide M20	Honing edge	TiN	8	12
	S32GUR NK5050	Carbide K10	Sharp edge	TiN	8	12
	S32GUR NK6060	Carbide M20	Honing edge	TiAℓN	8	12
	S32GUR NK8080	Carbide K10	Sharp edge	TiAℓN	8	12

R-Bit/10R-Bit

R-Bit 1 Blade

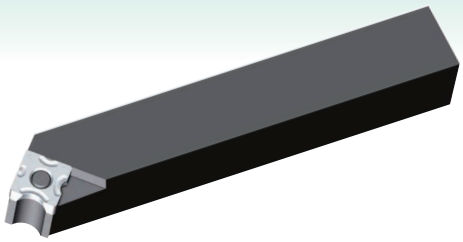
R0.5～R4

Specific agency Items



!! For general-purpose lathe

● R0.5～R4 Chamfering process can be made by lathe



Round corner Chamfering

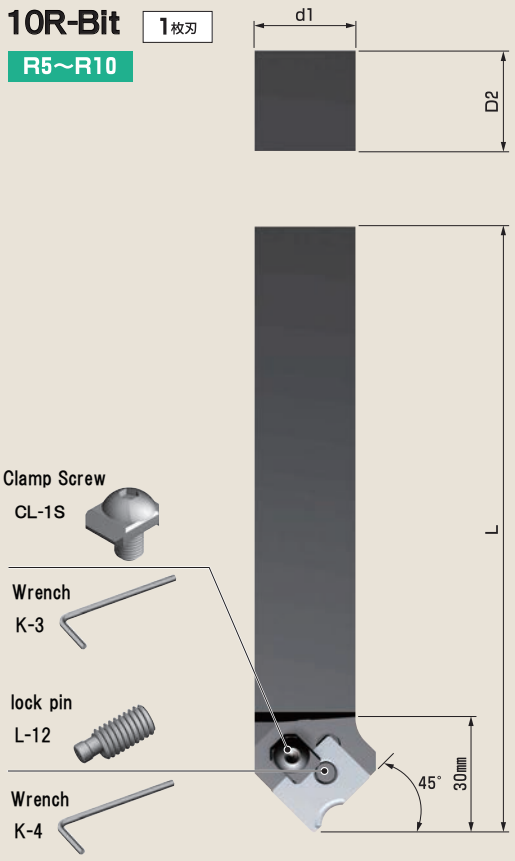
BODY

Product name	Model No.	blades	Dimensions (mm)			Inserts
			d1	D2	L	
R-Bit Specific agency Items	20XR	1	19	20	126	N43GXR-0.5R～4R

※ Inset is not supplied as standard accessory. Please purchase it separately.
※ Lock Pin and wrench are supplied as standard accessory

10R-Bit 1枚刃

R5～R10



!! For general-purpose lathe

● R5～R10 Chamfering process can be made by lathe

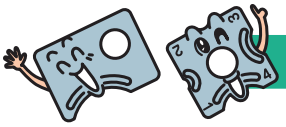
Round corner Chamfering

BODY

Product name	Model No.	blades	Dimensions (mm)			Inserts
			d1	D2	L	
10R-Bit	NEW 25CR	1	25	25	150	N54GCR-5R～10R

※ Inset is not supplied as standard accessory. Please purchase it separately.
※ Lock Pin and wrench are supplied as standard accessory

When mounting insert, please do not take reverse tightening.
Poor accuracy or finish or breakage of insert may be occurred due to the Eccentricity looking mechanism
When replacing insert, please make sure that the reserve tightening Was not made.

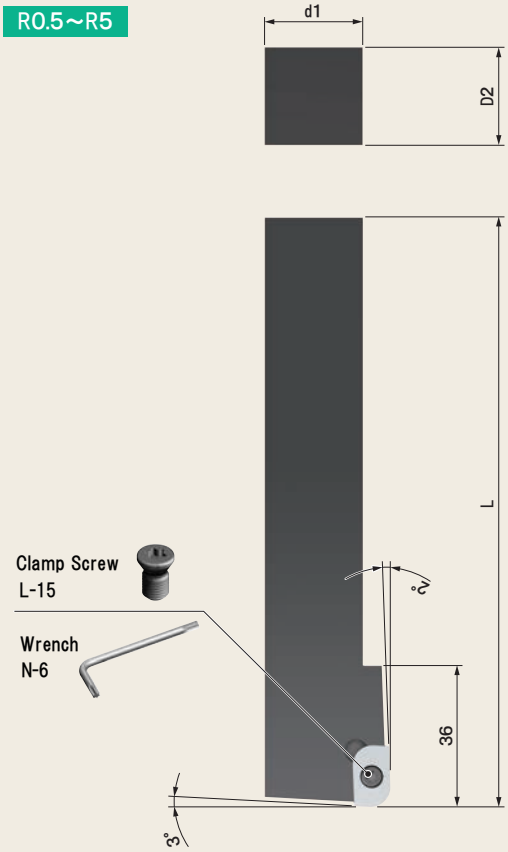


Insert information P.38

Sumicco R-Bit/Dekasumi R-Bit

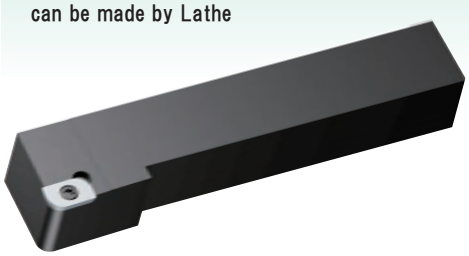
Sumicco R-Bit 1 Blade

R0.5～R5



!! For general-purpose lathe

●R0.5～R5 Corner round chamfering process can be made by Lathe



Corner R shoulder processing

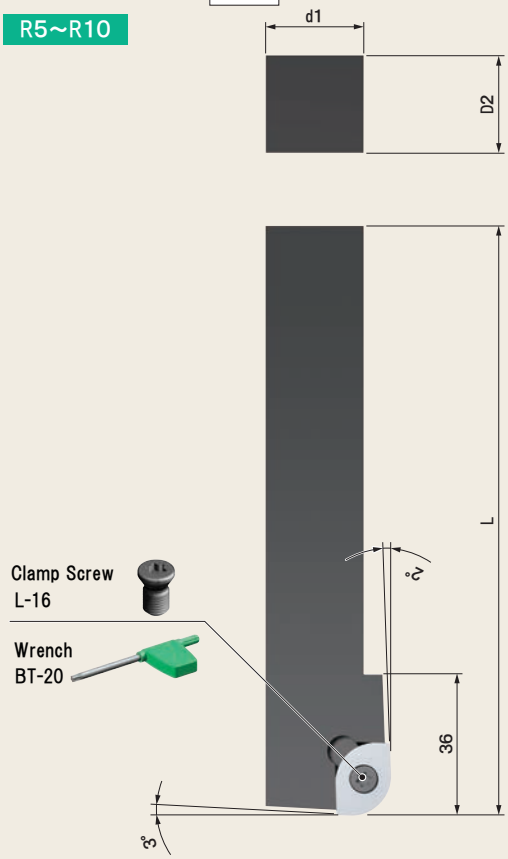
BODY

Product name	Model No.	blades	Dimensions (mm)			Inserts
			d1	D2	L	
Sumicco R-Bit	NEW 25SKB	1	25	25	150	A52GNR-0.5R～5R

※ Inset is not supplied as standard accessory. Please purchase it separately.
※ Lock Pin and wrench are supplied as standard accessory

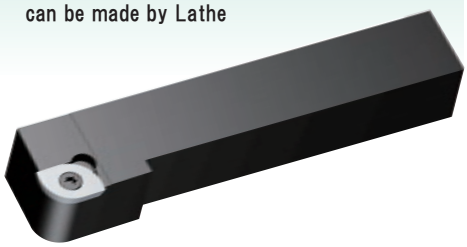
Dekasumi R-Bit 1 Blade

R5～R10



!! For general-purpose lathe

●R5～RE10 Corner round chamfering process can be made by Lathe



Corner R shoulder processing

BODY

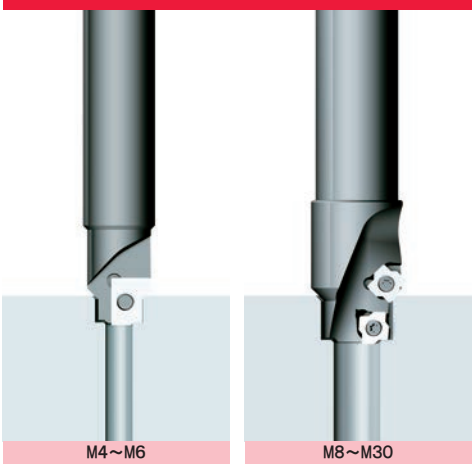
Product name	Model No.	blades	Dimensions (mm)			Inserts
			d1	D2	L	
Dekasumi R-Bit	NEW 25DCB	1	25	25	150	ADEW19T3-5R～10R

※ Inset is not supplied as standard accessory. Please purchase it separately.
※ Lock Pin and wrench are supplied as standard accessory

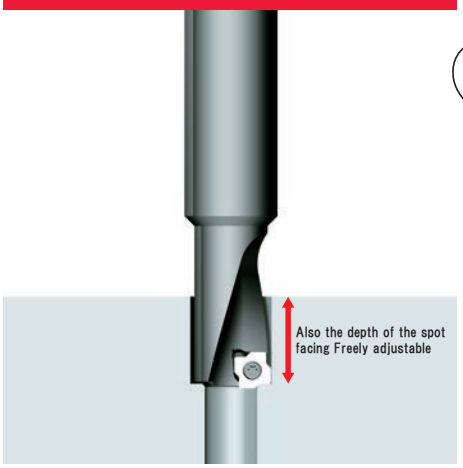
Insert information P.54

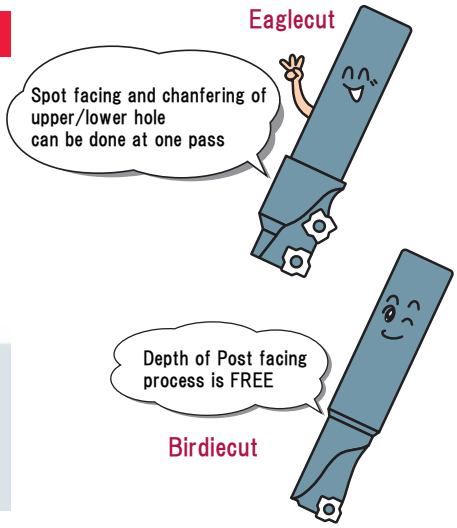
Eaglecut/Birdiecut

Cap Bolt Spot Facing Process (Eagle cut)



Cap Bolt Spot Facing Process (Birdie cut)





Shortening the process!

●By using our original Geometric insert,we successfully secured shortening time and saving manufacturing cost tremendously

geometric Insert

Lower stage when using corner
Upper stage when using corner

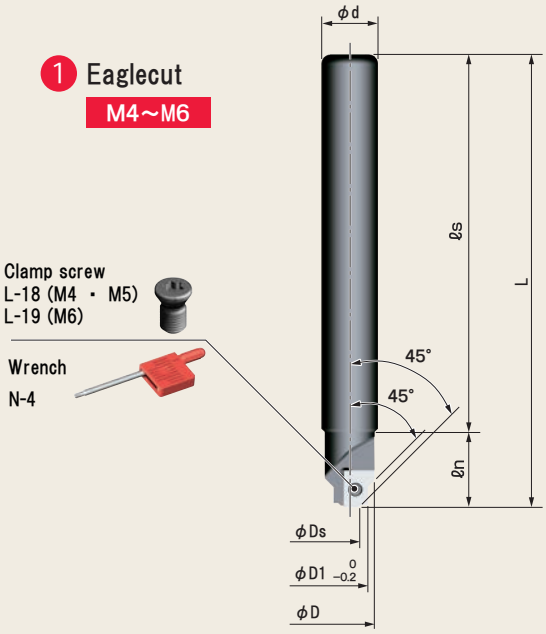
Our own geometric Insert realized cost down and shorten the working time very much

1 Eaglecut

M4～M6

Clamp screw
L-18 (M4 ・ M5)
L-19 (M6)

Wrench
N-4

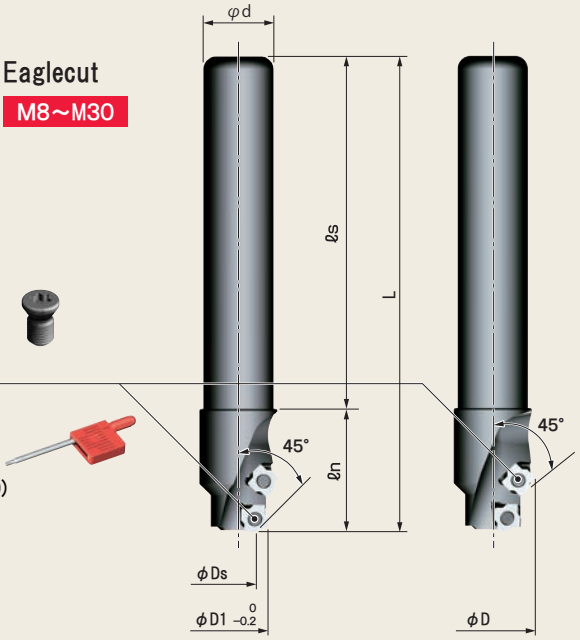


2 Eaglecut

M8～M30

Clamp screw
L-19 (M8)
M-1 (M10・M12)
L-15 (M14・M16)
L-16 (M18～M30)

Wrench
N-4 (M8)
MA-1 (M10・M12)
N-7 (M14・M16)
BT-20 (M18～M30)

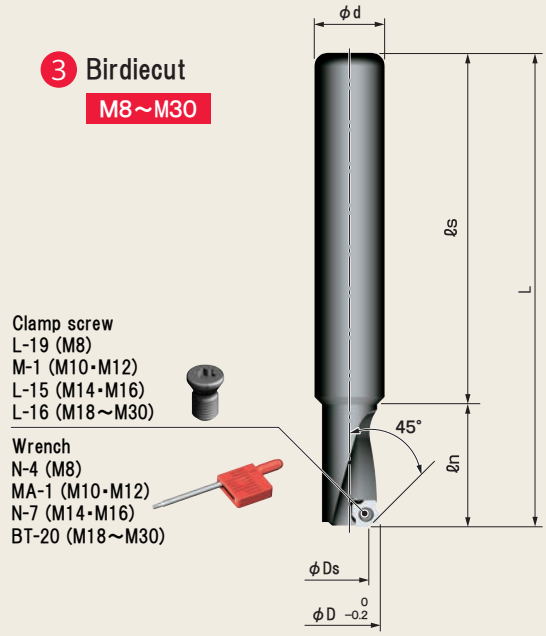


3 Birdiecut

M8～M30

Clamp screw
L-19 (M8)
M-1 (M10・M12)
L-15 (M14・M16)
L-16 (M18～M30)

Wrench
N-4 (M8)
MA-1 (M10・M12)
N-7 (M14・M16)
BT-20 (M18～M30)



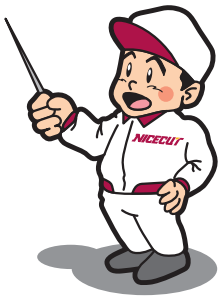
Body

Product Name	Model. No.	Fig.	blades	Dimensions (mm)							Inserts
				ϕD	ϕD1	ϕDs	ϕd	L	Rs	Rn	
Eaglecut	EC12-8XX-M4	❶	1	10.5	8	4	12	96	80	16	XX21MNX
	EC12-9.5XX-M5	❶	1	11	9.5	5	12	99	80	19	XX21MNX
	EC12-11XX-M6	❶	1	13	11	6	12	102	80	22	XX31MNX
	EC16-14XS-M8	❷	2	19	14	8.4	16	108	80	28	XS22MNX
	EC20-17.5XS-M10	❷	2	24	17.5	10.2	20	115	80	35	XS22MNX
	EC25-20XS-M12	❷	2	26.6	20	13	25	120	80	40	XS22MNX
	EC25-23XS-M14	❷	2	30.5	23	15	25	126	80	46	XS32MNX
	EC32-26XS-M16	❷	2	33.7	26	17	32	132	80	52	XS32MNX
	EC32-29XS-M18	❷	2	38	29	18.4	32	138	80	58	XS42MNX
	EC32-32XS-M20	❷	2	41.7	32	20.4	32	144	80	64	XS42MNX
	EC32-35XS-M22	❷	2	44.6	35	22.8	32	150	80	70	XS42MNX
	EC32-39XS-M24	❷	2	50.2	39	24.2	32	158	80	78	XS53MNX
	EC32-43XS-M27	❷	2	54.1	43	28.2	32	166	80	86	XS53MNX
	EC32-48XS-M30	❷	2	60.5	48	31.2	32	176	80	96	XS53MNX
Birdiecut	BC16-14XS-M8	❸	1	14		8.4	16	108	80	28	XS22MNX
	BC20-17.5XS-M10	❸	1	17.5		10.2	20	115	80	35	XS22MNX
	BC20-20XS-M12	❸	1	20		13	20	120	80	40	XS22MNX
	BC25-23XS-M14	❸	1	23		15	25	126	80	46	XS32MNX
	BC32-26XS-M16	❸	1	26		17	32	132	80	52	XS32MNX
	BC32-29XS-M18	❸	1	29		18.4	32	138	80	58	XS42MNX
	BC32-32XS-M20	❸	1	32		20.4	32	144	80	64	XS42MNX
	BC32-35XS-M22	❸	1	35		22.8	32	150	80	70	XS42MNX
	BC32-39XS-M24	❸	1	39		24.2	32	158	80	78	XS53MNX
	BC32-43XS-M27	❸	1	43		28.2	32	166	80	86	XS53MNX
	BC32-48XS-M30	❸	1	48		31.2	32	176	80	96	XS53MNX

※ Above Tools are supplied with NK2020 Insert

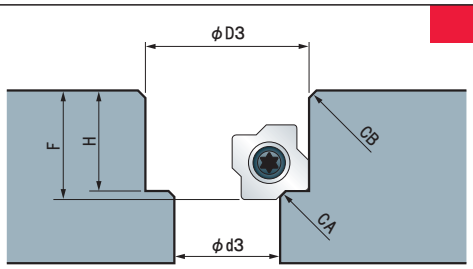
Cutting Conditions

Material	material Model	NK2020	NK6060
	Feed per blade (fz)	Cutting speed (m / min)	
General steel	0.05~0.1	50~100	50~100
Alloy steel	0.05~0.1	50~100	50~100
Stainless steel	0.05~0.1	40~80	40~80
Aluminum, resin,brass	×	×	×
Cast steel	0.05~0.1	50~100	50~100



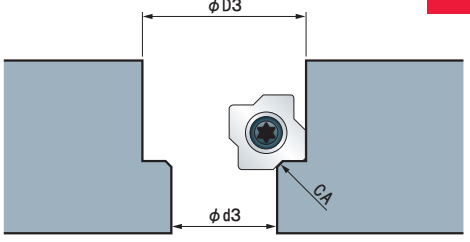
- According to workpiece shape, large or small chamfering amount and position of blade the cutting conditions will have to be adjusted
- When chamfering in large amount, please take lowering cutting condition
- Coolant will be recommended
- Inset recommended for the workpiece

Eaglecut Processing Dimensional drawing



	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30
ϕd3	ϕ4.5	ϕ5.5	ϕ6.6	ϕ9	ϕ11	ϕ14	ϕ16	ϕ18	ϕ20	ϕ22	ϕ24	ϕ26	ϕ30	ϕ33
ϕD3	ϕ8	ϕ9.5	ϕ11	ϕ14	ϕ17.5	ϕ20	ϕ23	ϕ26	ϕ29	ϕ32	ϕ35	ϕ39	ϕ43	ϕ48
CA	C0.3	C0.3	C0.3	C0.5	C0.5	C0.5	C0.5	C0.5	C0.5	C0.5	C1	C1	C1	C1
CB	C0.5	C0.5	C0.5	C1	C1	C1	C1	C1	C1	C1	C1	C1	C1	C1
H	4.4	5.4	6.5	8.6	10.8	13	15.2	17.5	19.5	21.5	23.5	25.5	29	32
F	4.95	5.95	7.1	9.4	11.7	14	16.2	18.5	20.8	22.8	25.1	27.4	30.9	33.9

Birdiecut Processing Dimensional drawing

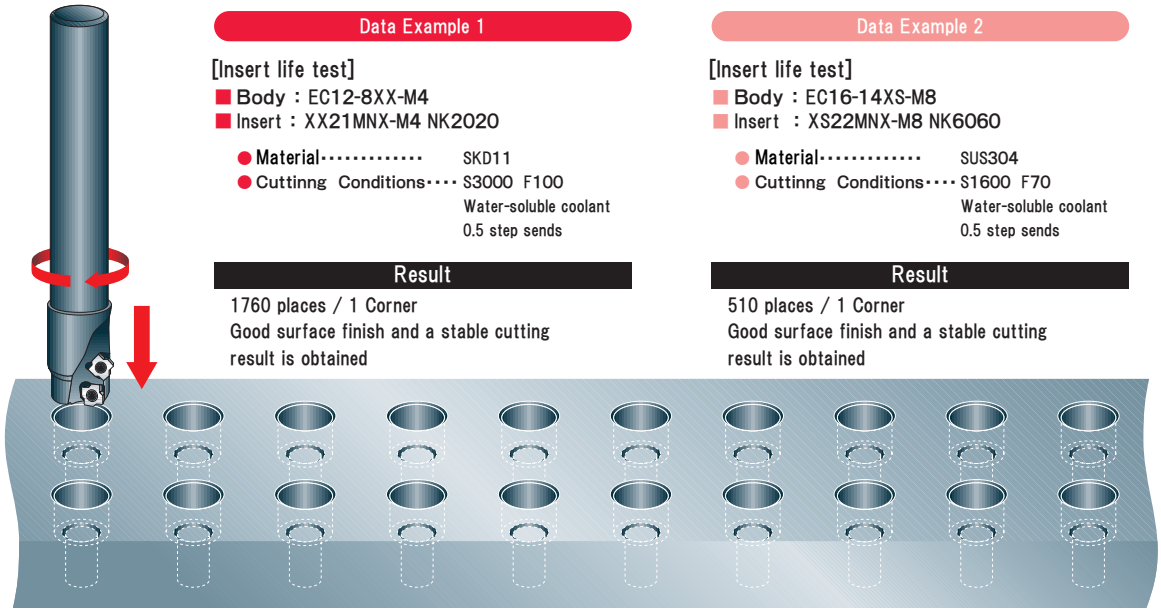


	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30
ϕd3	ϕ9	ϕ11	ϕ14	ϕ16	ϕ18	ϕ20	ϕ22	ϕ24	ϕ26	ϕ30	ϕ33
ϕD3	ϕ14	ϕ17.5	ϕ20	ϕ23	ϕ26	ϕ29	ϕ32	ϕ35	ϕ39	ϕ43	ϕ48
CA	C0.5	C0.5	C0.5	C0.5	C0.5	C0.5	C0.5	C1	C1	C1	C1

Insert informationP.45

Eaglecut/Birdiecut

Processing Example



Data Example 1

[Insert life test]
- Body : EC12-8XX-M4
- Insert : XX21MNX-M4 NK2020

- Material····· SKD11
- Cuttinng Conditions···· S3000 F100
  Water-soluble coolant
  0.5 step sends

Result

1760 places / 1 Corner
Good surface finish and a stable cutting result is obtained

Data Example 2

[Insert life test]
- Body : EC16-14XS-M8
- Insert : XS22MNX-M8 NK6060

- Material····· SUS304
- Cuttinng Conditions···· S1600 F70
  Water-soluble coolant
  0.5 step sends

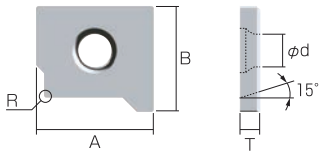
Result

510 places / 1 Corner
Good surface finish and a stable cutting result is obtained

Insert

●Eaglecut(M4～M6)

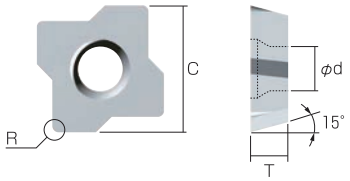
〈XX21MNX〉
〈XX31MNX〉



型　番	A	B	T	R	φd
XX21MNX-M4	8mm	6.548mm	1.59mm	R0.2	2.3mm
XX21MNX-M5	8mm	6.841mm	1.59mm	R0.2	2.3mm
XX31MNX-M6	9mm	8.084mm	1.59mm	R0.2	2.5mm

●Eaglecut(M4～M6)
Birdiecut

[XS22MNX] [XS42MNX]
[XS32MNX] [XS53MNX]

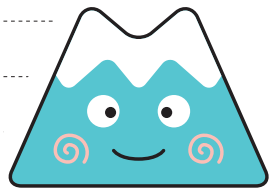


型　番	C	T	R	φd
XS22MNX-M8	6.35mm	2.38mm	R0.4	2.5mm
XS22MNX-M10	7.938mm	2.38mm	R0.4	3.4mm
XS22MNX-M12	7.938mm	2.38mm	R0.4	3.4mm
XS32MNX-M14	9.525mm	3.18mm	R0.8	4.4mm
XS32MNX-M16	9.525mm	3.18mm	R0.8	4.4mm
XS42MNX-M18	12.7mm	3.18mm	R0.8	5.5mm
XS42MNX-M20	12.7mm	3.18mm	R0.8	5.5mm
XS42MNX-M22	12.7mm	3.18mm	R0.8	5.5mm
XS53MNX-M24	15.875mm	4.76mm	R0.8	5.5mm
XS53MNX-M27	15.875mm	4.76mm	R0.8	5.5mm
XS53MNX-M30	15.875mm	4.76mm	R0.8	5.5mm

Model.No.	Material	Coating	Usable corners	Quantity per box
XX21MNX-M4 NK2020	Carbide M20	None	1	12
XX21MNX-M5 NK2020	Carbide M20	None	1	12
XX31MNX-M6 NK2020	Carbide M20	None	1	12
XX21MNX-M4 NK6060	Carbide M20	TiAℓN	1	12
XX21MNX-M5 NK6060	Carbide M20	TiAℓN	1	12
XX31MNX-M6 NK6060	Carbide M20	TiAℓN	1	12
XS22MNX-M8 NK2020	Carbide M20	None	4	12
XS22MNX-M10 NK2020	Carbide M20	None	4	12
XS22MNX-M12 NK2020	Carbide M20	None	4	12
XS32MNX-M14 NK2020	Carbide M20	None	4	12
XS32MNX-M16 NK2020	Carbide M20	None	4	12
XS42MNX-M18 NK2020	Carbide M20	None	4	12
XS42MNX-M20 NK2020	Carbide M20	None	4	12
XS42MNX-M22 NK2020	Carbide M20	None	4	12
XS53MNX-M24 NK2020	Carbide M20	None	4	12
XS53MNX-M27 NK2020	Carbide M20	None	4	12
XS53MNX-M30 NK2020	Carbide M20	None	4	12
XS22MNX-M8 NK6060	Carbide M20	TiAℓN	4	12
XS22MNX-M10 NK6060	Carbide M20	TiAℓN	4	12
XS22MNX-M12 NK6060	Carbide M20	TiAℓN	4	12
XS32MNX-M14 NK6060	Carbide M20	TiAℓN	4	12
XS32MNX-M16 NK6060	Carbide M20	TiAℓN	4	12
XS42MNX-M18 NK6060	Carbide M20	TiAℓN	4	12
XS42MNX-M20 NK6060	Carbide M20	TiAℓN	4	12
XS42MNX-M22 NK6060	Carbide M20	TiAℓN	4	12
XS53MNX-M24 NK6060	Carbide M20	TiAℓN	4	12
XS53MNX-M27 NK6060	Carbide M20	TiAℓN	4	12
XS53MNX-M30 NK6060	Carbide M20	TiAℓN	4	12

※ edge shape, will all commodity honing edge.

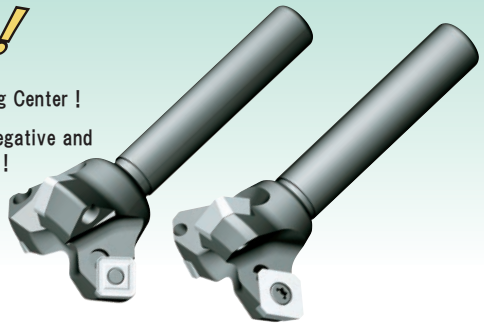
MEMO



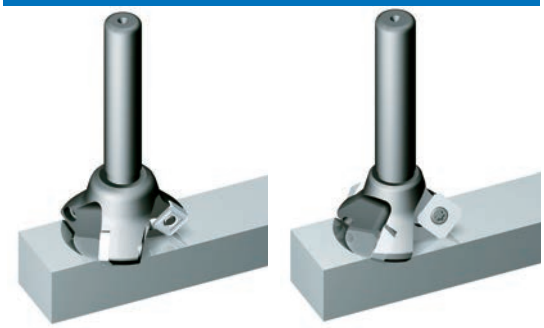
Aeromill NEW TikoCutter

Smaller Shank (Aeromill) !

- Consider to use this Aeromill for Non-Rigidity Machines like Tapping Center !
- Choose various workpiece with Negative and Positive type Face Milling Cutters !



Face Milling (Aeromill)

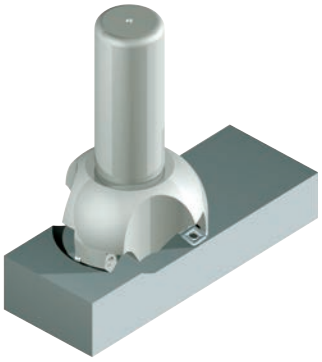


φ30・φ40

Thin workpiece processing (NEW TikoCutter) !

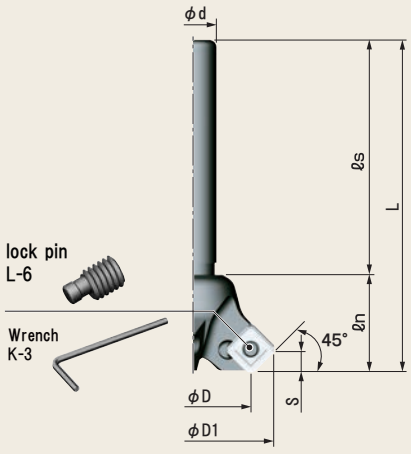
- Consider to use NEW TikoCutter for Small Machining Center !
- Recommend NEW TikoCutter for thin workpiece (can manufacturer etc) Processing. Process without Chattering due to our original negative-positive Geometries method

Face Milling (NEW Tiko Cutter, NS type)

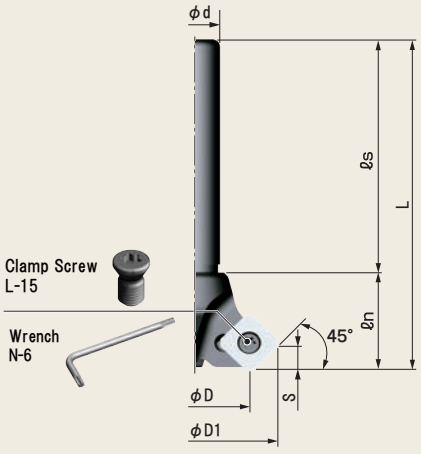


φ60・φ80

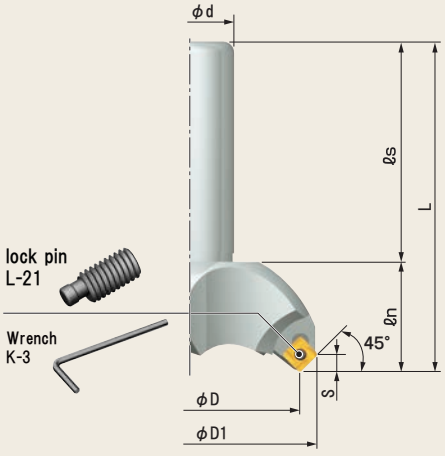
① Aeromill
NS type (Negative S)



② Aeromill
PS type (Positive S)



③ NEW Tiko Cutter
NS type (Negative S)



Body

Product name	Model No.		Fig.	blades	Dimensions (mm) φD	φD1	φd	L	ℓs	ℓn	S	Weight (g)	Inserts
Aeromill	NS	ARN12-30S	①	3	30	42	12	85	60	25	5.2	132	S32MOZ / S32GUR
	NS	ARN16-40S	①	3	40	52	16	85	60	25	5.2	210	S32MOZ / S32GUR
	PS	ARP12-30S	②	3	30	43.2	12	85	60	25	6	116	S3H3MNZ / S3H3GNZ
	PS	ARP16-40S	②	3	40	53.6	16	85	60	25	6	224	S3H3MNZ / S3H3GNZ
NEW TikoCutter	TKN20-60S-03		③	3	60	73	20	120	80	40	5.7	668	S32MOZ / S32GUR
	TKN20-80S-03		③	3	80	93	20	120	80	40	5.7	826	S32MOZ / S32GUR
	TKN32-60S-03		③	3	60	73	32	120	80	40	5.7	968	S32MOZ / S32GUR
	TKN32-80S-03		③	3	80	93	32	120	80	40	5.7	1,126	S32MOZ / S32GUR

※ Insert is not supplied as standard accessory
※ Clamp Screw, Lock Pin and wrench are supplied as standard accessories

⚠ Do not take reverse tightening when mounting or replacing insert
Due to the eccentricity locking mechanism, poor accuracy or breakage of Insert may be occurring.(Excepting PS type)

Cutting Conditions

S32MOZ									
Material \ Material Model		NK2001	NK2050	AB01F	NK1010	NK2020	NK3030	NK6060	AC15T
Material	Feed per blade (fz)	Cutting speed (m / min)							
General Steel	0.1～0.3	200～300	200～300	200～300		150～200	150～250	200～300	
Alloy Steel	0.1～0.3	200～250	200～250	200～250		150～200	150～250	200～300	
Stainless Steel	0.1～0.25					120～180	150～200	150～250	150
Aluminum, Resin,Brass									
Castings	0.1～0.3	200～250 ※FCD		200～250 ※FCD	150～200				

● Chamfered Insert nose increase feed speed per I-blade and make a good surface finishing
● Yellow marked rate is recommended for the workpiece listed

S32GUR									
Material \ Material Model		NK2001	NK1010	NK2020	NK3030	NK5050	NK6060	NK8080	DIA
General Steel	0.08～0.2	200～300		150～200					
Alloy Steel	0.08～0.2	200～250		150～200					
Stainless Steel	0.08～0.2			120～180	150～200		150～250	150～250 ※SUS316	
Aluminum, Resin,Brass	0.08～0.3		250～800			200～800		200～800	500～2,000
Castings	0.08～0.2	200～250 ※FCD	100～150						

● Insert breaker ensures sharp processing and R shaped nose ensure less cutting resistance, and recommended the workpiece which are easily chattered and a distortion arises
● Yellow marked rate is recommended for the workpiece listed

		S3H3MNZ				S3H3GNZ	
Material \ Material Model		NK2001	NK2020	NK6060	AC15D	NK1010	NK9090
General Steel	0.08～0.2	200～300	150～200				
Alloy Steel	0.08～0.2	200～300	150～200				
Stainless Steel	0.1			150～250	150		
Aluminum, Resin,Brass	0.1～0.2					500～1,000	500～1,000
Castings							

● Chamfered Insert nose increase feed speed per I-blade and make a good surface finishing
● Yellow marked rate is recommended for the workpiece listed

Processing Example (Aeromill)

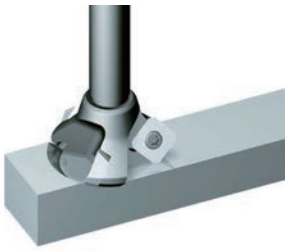
[Face Milling (PS type)]

■ Body : ARP16-40S
■ Insert : S3H3MNZ NK1010

● Material・・・・・・・・ A5052
● Rotation Speed・・ 1,000r.p.m.
● Table feed・・・・・・・ 300mm/min
● Depth of Cut・・・・ 0.5mm
● Cutting Oil・・・・・・ None

Result

Machined surface good.



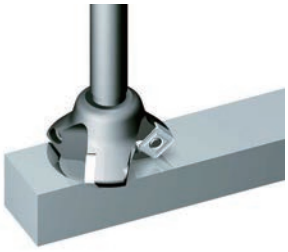
[Face Milling (NS type)]

■ Body : ARN12-30S
■ Insert : S32MOZ NK2001

● Material・・・・・・・・ SS
● Rotation Speed・・ 800r.p.m.
● Table feed・・・・・・・ 500mm/min
● Depth of Cut・・・・ 0.1mm
● Cutting Oil・・・・・・ None

Result

Machined surface good.



Processing Example (NEW TikoCutter)

[Face Milling (NS type)]

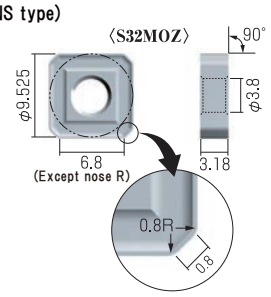
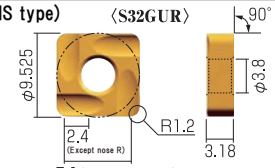
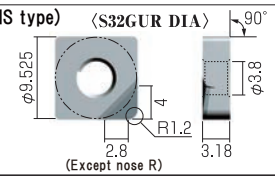
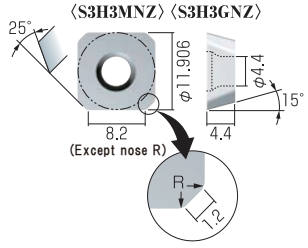
■ Body : TKN32-60S-03
■ Insert : S32MOZ AC15T

● Material・・・・・・・・ SUS304
● Rotation Speed・・ 1,000r.p.m.
● Table feed・・・・・・・ 300mm/min
● Depth of Cut・・・・ 2mm
● Cutting Oil・・・・・・ None

Result

Machined surface good.

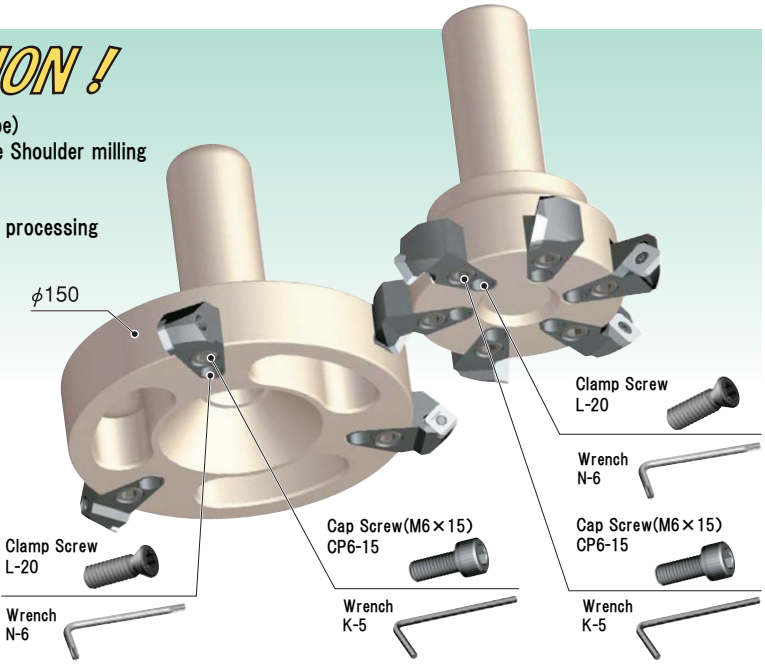
Insert

Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
●(NS type) 〈S32MOZ〉 	S32MOZ NK2001	Cermet	Honing edge	None	8	12
	S32MOZ NK2050	Cermet	Honing edge	None	8	12
	NEW S32MOZ AB01F	Cermet	Honing edge	AlCrN	8	12
	S32MOZ NK1010	Carbide K10	Sharp edge	None	8	12
	S32MOZ NK2020	Carbide M20	Honing edge	None	8	12
	S32MOZ NK3030	Carbide M20	Honing edge	TiN	8	12
	S32MOZ NK6060	Carbide M20	Honing edge	TiAlN	8	12
	S32MOZ AC15T	Fine particles Carbide	Honing edge	AlCrN	8	12
●(NS type) 〈S32GUR〉 	S32GUR NK2001	Cermet	Honing edge	None	8	12
	S32GUR NK1010	Carbide K10	Sharp edge	None	8	12
	S32GUR NK2020	Carbide M20	Honing edge	None	8	12
	S32GUR NK3030	Carbide M20	Honing edge	TiN	8	12
	S32GUR NK5050	Carbide K10	Sharp edge	TiN	8	12
	S32GUR NK6060	Carbide M20	Honing edge	TiAlN	8	12
	S32GUR NK8080	Carbide K10	Sharp edge	TiAlN	8	12
●(NS type) 〈S32GUR DIA〉 	S32GUR DIA	DIA	Sharp edge	None	1	1
●(PS type) 〈S3H3MNZ〉〈S3H3GNZ〉 	S3H3MNZ NK2001	Cermet	Honing edge	None	4	12
	S3H3GNZ NK1010	Carbide K10	Sharp edge	None	4	12
	S3H3MNZ NK2020	Carbide M20	Honing edge	None	4	12
	S3H3MNZ NK6060	Carbide M20	Honing edge	TiAlN	4	12
	S3H3GNZ NK9090	Carbide K10	Sharp edge	None	4	12
	S3H3MNZ AC15D	Fine particles Carbide	Honing edge	AlCrN	4	12

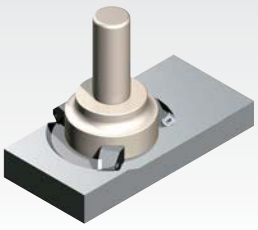
New NICECUT

NEW INNOTIVE EVOLUTION !

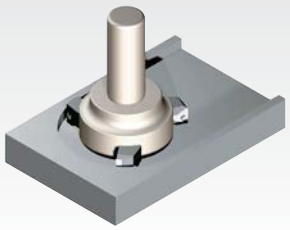
- NS (negative S type) ・ PS (positive S type) ・ NT (negative T type)
  Multi-Structure realized Negative/Positive face milling and Negative Shoulder milling
- Exchangeable processing diameter by changing
  BASE and again exchangeable processing type by changing ARM
- 3-blades and 6-blades are available and can be used for high speed processing



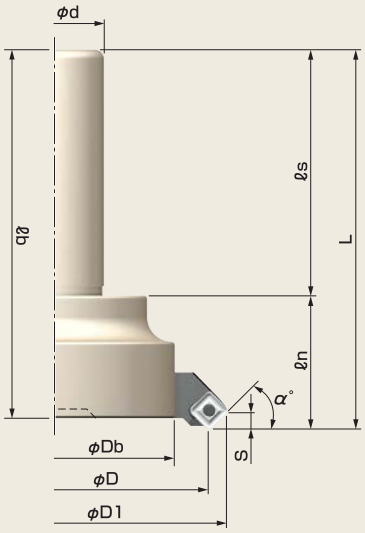
Face Milling
[NS・PS type]



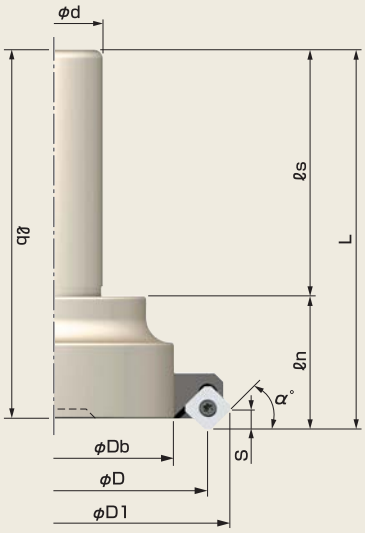
Shoulder Milling
[NT type]



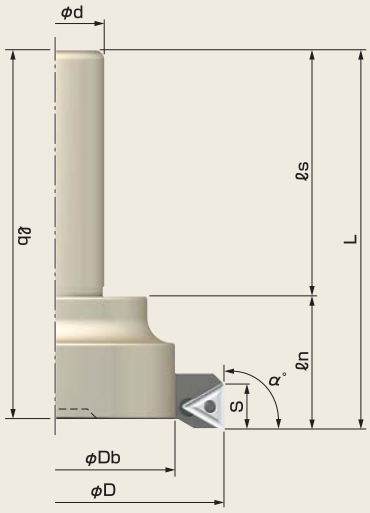
1 NS type (Negative S)



2 PS type (Positive S)



3 NT type (Negative T)



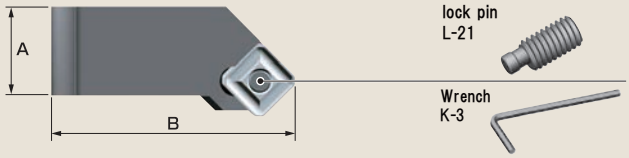
Body

	Model No.	Fig.	Blades	Dimensions (mm) ϕD	ϕD1	ϕDb	ϕd	L	ℓs	ℓn	ℓb	S	(g)	α°	Inserts	base	arm
NS	NKN20-100S-03	1	3	100	112	78	20	123.5	80	43.5	120	5.0	1,525	45	S32MOZ / S32GUR		AMNS-03
	NKN32-100S-03	1	3	100	112	78	32	123.5	80	43.5	120	5.0	1,825	45	S32MOZ / S32GUR	NK32078-03	AMNS-03
	NKN20-130S-03	1	3	130	142	108	20	123.5	80	43.5	120	5.0	2,755	45	S32MOZ / S32GUR		AMNS-03
	NKN32-130S-03	1	3	130	142	108	32	123.5	80	43.5	120	5.0	3,055	45	S32MOZ / S32GUR	NK32108-03	AMNS-03
	NKN32-150S-03	1	3	150	162.5	128	32	120	85	35	116.5	5.0	2,505	45	S32MOZ / S32GUR	NK32128-03	AMNS-03
	NKN32-100S-06	1	6	100	112	78	32	123.5	80	43.5	120	5.0	1,890	45	S32MOZ / S32GUR	NK32078-06	AMNS-06
	NKN32-130S-06	1	6	130	142	108	32	123.5	80	43.5	120	5.0	3,120	45	S32MOZ / S32GUR	NK32108-06	AMNS-06
PS	NKP32-100S-03	2	3	100	115	78	32	123.5	80	43.5	120	6.2	1,834	45	S3H3MNZ / S3H3GNZ	NK32078-03	AMPS-03
	NKP32-130S-03	2	3	130	145	108	32	123.5	80	43.5	120	6.2	3,064	45	S3H3MNZ / S3H3GNZ	NK32108-03	AMPS-03
	NKP32-150S-03	2	3	150	164.7	128	32	120	85	35	116.5	6.2	2,514	45	S3H3MNZ / S3H3GNZ	NK32128-03	AMPS-03
	NKP32-100S-06	2	6	100	115	78	32	123.5	80	43.5	120	6.2	1,908	45	S3H3MNZ / S3H3GNZ	NK32078-06	AMPS-06
	NKP32-130S-06	2	6	130	145	108	32	123.5	80	43.5	120	6.2	3,138	45	S3H3MNZ / S3H3GNZ	NK32108-06	AMPS-06
NT	NKN32-110T-03	3	3	110		78	32	123.5	80	43.5	120	14.5	1,849	90	T33MOZ / T33MOR / T33GUR	NK32078-03	AMNT-03
	NKN32-140T-03	3	3	140		108	32	123.5	80	43.5	120	14.5	3,079	90	T33MOZ / T33MOR / T33GUR	NK32108-03	AMNT-03
	NKN32-160T-03	3	3	160		128	32	120	85	35	116.5	14.5	2,529	90	T33MOZ / T33MOR / T33GUR	NK32128-03	AMNT-03
	NKN32-110T-06	3	6	110		78	32	123.5	80	43.5	120	14.5	1,938	90	T33MOZ / T33MOR / T33GUR	NK32078-06	AMNT-06
	NKN32-140T-06	3	6	140		108	32	123.5	80	43.5	120	14.5	3,168	90	T33MOZ / T33MOR / T33GUR	NK32108-06	AMNT-06

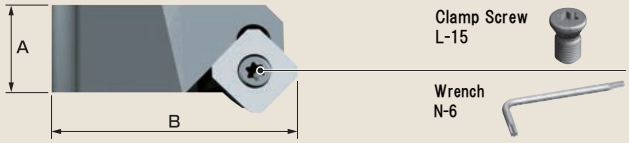
※ Insert is not equipped as standard accessories. Please order separately
※ Clamp screw, lock pin, cap screw and wrench are supplied as standard accessories

⚠ When mounting or replacing insert, please do not take reverse tightening.
Due to the eccentricity looking mechanism, poor accuracy or breakage of insert may be occurred by reverse tightening (NS, NT)

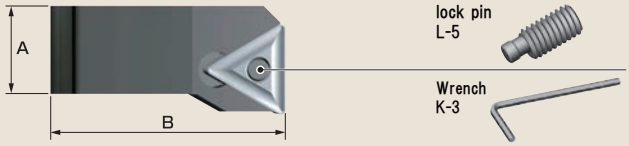
④ NS type Weight: 49g l (excluding Insert)



⑤ PS type Weight: 52g l (excluding Insert)



⑥ NT type Weight: 57g l (excluding Insert)



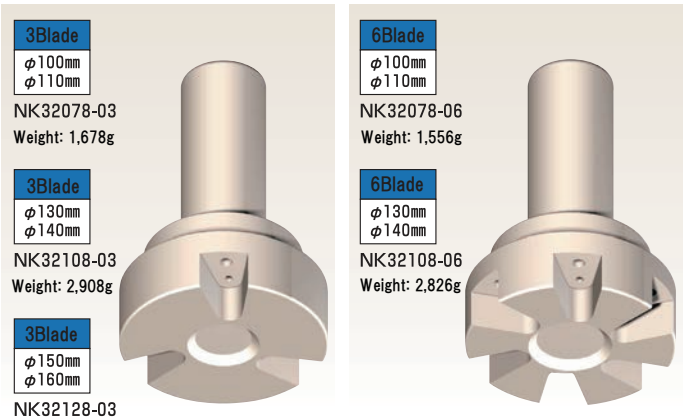
● Arm for New NICECUT cannot be used for Old model

Arm

Model No.	Fig.	Blades	Dimensions (mm) A	Dimensions (mm) B	Type	Quantity per box
AMNS-03	④	3	15.0	40.5	NS	(Three 1 set)
AMPS-03	⑤	3	15.0	41.8	PS	(Three 1 set)
AMNT-03	⑥	3	15.0	39.5	NT	(Three 1 set)
AMNS-06	④	6	15.0	40.5	NS	(Six 1 set)
AMPS-06	⑤	6	15.0	41.8	PS	(Six 1 set)
AMNT-06	⑥	6	15.0	39.5	NT	(Six 1 set)

※ arm(3pcs/set or 6pcs/set) is supplied per set. Individual pieces Arm cannot be supplied
※ A set of arm will have to be purchased

Base



3Blade φ100mm φ110mm
NK32078-03
Weight: 1,678g

3Blade φ130mm φ140mm
NK32108-03
Weight: 2,908g

3Blade φ150mm φ160mm
NK32128-03
Weight: 2,358g

6Blade φ100mm φ110mm
NK32078-06
Weight: 1,556g

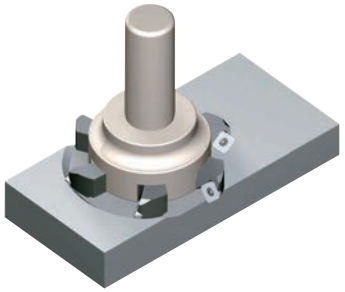
6Blade φ130mm φ140mm
NK32108-06
Weight: 2,826g

Processing Example

[Face Milling]

■ Body : NKP32-100S-06
■ Insert : S3H3MNZ NK2020

● Material・・・・・・・・・SUS304
● Work length・・・・・・700mm
● Rotation Speed・・・500r.p.m
● Feed (X-axis)・・・・300mm
● Cutting Depth・・・・1mm



Result

Good!
No secondary burrs and
no chattering process

Cutting Conditions

S32MOZ

Material	Material Model	NK2001	NK2050	AB01F	NK1010	NK2020	NK3030	NK6060	AC15T
	Feed per blade (fz)	Cutting speed (m / min)							
General Steel	0.1～0.3	200～300	200～300	200～300		150～200	150～250	200～300	
Alloy Steel	0.1～0.3	200～250	200～250	200～250		150～200	150～250	200～300	
Stainless Steel	0.1～0.25					120～180	150～200	150～250	150
Aluminum, Resin,Brass									
Castings	0.1～0.3	200～250 ※FCD		200～250 ※FCD	150～200				

● Our original Insert have"Chamfered nose" which ensure a good surface finishing even feed speed per blade are increased
● Yellow marked rate is recommended for the workpiece listed

S32GUR

Material	Material Model	NK2001	NK1010	NK2020	NK3030	NK5050	NK6060	NK8080	DIA
	Feed per blade (fz)	Cutting speed (m / min)							
General Steel	0.08～0.2	200～300		150～200					
Alloy Steel	0.08～0.2	200～250		150～200					
Stainless Steel	0.08～0.2			120～180	150～200		150～250	150～250 ※SUS316	
Aluminum, Resin,Brass	0.08～0.3		250～800			200～800		200～800	500～2,000
Castings	0.08～0.2	200～250 ※FCD	100～150						

● Original Insert breaker realize a sharp prosessing. Insert nose chamfered minimize cutting resistance. Suitable for thin materials(easy to deform or chatter) processing
● Yellow marked rate is recommended for the workpiece listed

T33MOR

Material	Material Model	NK2001	NK1010	NK2020	NK3030	NK6060
	Feed per blade (fz)	Cutting speed (m / min)				
General Steel	0.1～0.2	200～220		150～180	150～220	
Alloy Steel	0.1～0.2	200～220		150～180	150～220	
Stainless Steel	0.1～0.15			120～160	150～180	150～200
Aluminum, Resin,Brass						
Castings	0.1～0.2	200～220 ※FCD	150～180			

● Original Insert breaker realize a sharp prosessing. Insert nose chamfered minimize cutting resistance.
● Yellow marked rate is recommended for the workpiece listed

T33MOZ

Material	Material Model	NK2001	NK1010	NK2020	NK3030	NK6060
	Feed per blade (fz)	Cutting speed (m / min)				
General Steel	0.1～0.3	200～220		150～180	150～200	
Alloy Steel	0.1～0.3	200～220		150～180	150～200	
Stainless Steel	0.1～0.25			120～160	120～180	150～200
Aluminum, Resin,Brass						
Castings	0.1～0.3	200～220 ※FCD	150～180			

● Our original Insert have"Chamfered nose" which ensure a good surface finishing even feed speed per blade are increased
● Yellow marked rate is recommended for the workpiece listed

T33GUR

Material	Material Model	NK2001	NK1010	NK2020	NK3030	NK5050	NK6060	NK8080
	Feed per blade (fz)	Cutting speed (m / min)						
General Steel	0.08～0.2	200～220		150～180				
Alloy Steel	0.08～0.2	200～220		150～180				
Stainless Steel	0.08～0.2			120～180	150～180		150～220	150～220 ※SUS316
Aluminum, Resin,Brass	0.08～0.3		250～750			200～750		200～750
Castings	0.08～0.2	200～220 ※FCD						150～220

● Original Insert breaker realize a sharp prosessing. Insert nose chamfered minimize cutting resistance. Suitable for thin materials(easy to deform or chatter) processing
● Yellow marked rate is recommended for the workpiece listed

S3H3MNZ / S3H3GNZ

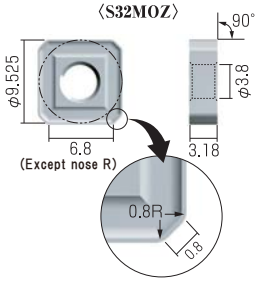
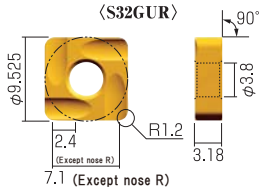
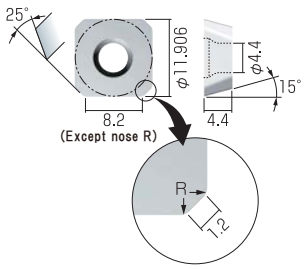
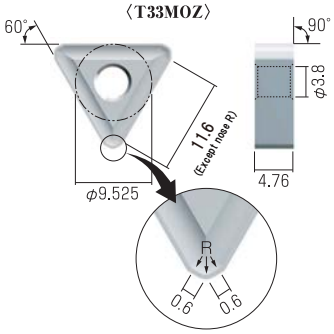
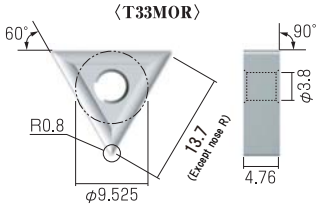
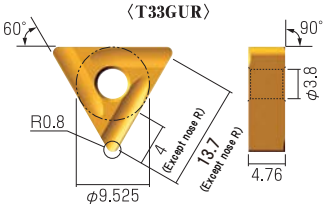
Material	Material Model	NK2001	NK2020	NK6060	AC15D	NK1010	NK9090
	Feed per blade (fz)	Cutting speed (m / min)					
General Steel	0.08～0.2	200～300	150～200				
Alloy Steel	0.08～0.2	200～300	150～200				
Stainless Steel	0.1			150～250	150		
Aluminum, Resin,Brass	0.1～0.2					500～1,000	500～1,000
Castings							

● Our original Insert have"Chamfered nose" which ensure a good surface finishing even feed speed per blade are increased
● Yellow marked rate is recommended for the workpiece listed

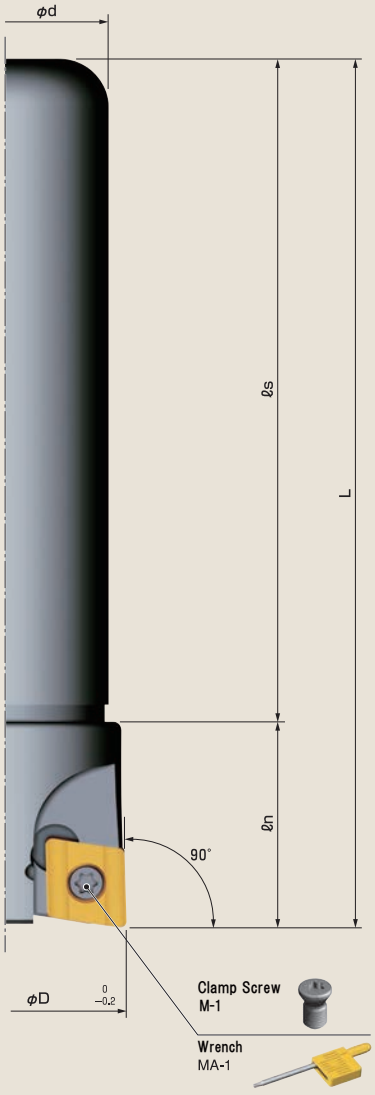
Insert to P.51

New Nice Cut

Insert

Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
〈S32MOZ〉 	S32MOZ NK2001	Cermet	Honing edge	None	8	12
	S32MOZ NK2050	Cermet	Honing edge	None	8	12
	NEW S32MOZ AB01F	Cermet	Honing edge	AlCrN	8	12
	S32MOZ NK1010	Carbide K10	Sharp edge	None	8	12
	S32MOZ NK2020	Carbide M20	Honing edge	None	8	12
	S32MOZ NK3030	Carbide M20	Honing edge	TiN	8	12
	S32MOZ NK6060	Carbide M20	Honing edge	TiAlN	8	12
	S32MOZ AC15T	Fine particles Carbide	Honing edge	AlCrN	8	12
〈S32GUR〉 	S32GUR NK2001	Cermet	Honing edge	None	8	12
	S32GUR NK1010	Carbide K10	Sharp edge	None	8	12
	S32GUR NK2020	Carbide M20	Honing edge	None	8	12
	S32GUR NK3030	Carbide M20	Honing edge	TiN	8	12
	S32GUR NK5050	Carbide K10	Sharp edge	TiN	8	12
	S32GUR NK6060	Carbide M20	Honing edge	TiAlN	8	12
	S32GUR NK8080	Carbide K10	Sharp edge	TiAlN	8	12
〈S32GUR DIA〉 	S32GUR DIA	DIA	Sharp edge	None	1	1
〈S3H3MNZ〉〈S3H3GNZ〉 	S3H3MNZ NK2001	Cermet	Honing edge	None	4	12
	S3H3GNZ NK1010	Carbide K10	Sharp edge	None	4	12
	S3H3MNZ NK2020	Carbide M20	Honing edge	None	4	12
	S3H3MNZ NK6060	Carbide M20	Honing edge	TiAlN	4	12
	S3H3GNZ NK9090	Carbide K10	Sharp edge	None	4	12
	S3H3MNZ AC15D	Fine particles Carbide	Honing edge	AlCrN	4	12
〈T33MOZ〉 	T33MOZ NK2001	Cermet	Honing edge	None	6	12
	T33MOZ NK1010	Carbide K10	Sharp edge	None	6	12
	T33MOZ NK2020	Carbide M20	Honing edge	None	6	12
	T33MOZ NK3030	Carbide M20	Honing edge	TiN	6	12
	T33MOZ NK6060	Carbide M20	Honing edge	TiAlN	6	12
〈T33MOR〉 	T33MOR NK2001	Cermet	Honing edge	None	6	12
	T33MOR NK1010	Carbide K10	Sharp edge	None	6	12
	T33MOR NK2020	Carbide M20	Honing edge	None	6	12
	T33MOR NK3030	Carbide M20	Honing edge	TiN	6	12
	T33MOR NK6060	Carbide M20	Honing edge	TiAlN	6	12
〈T33GUR〉 	T33GUR NK2001	Cermet	Honing edge	None	6	12
	T33GUR NK1010	Carbide K10	Sharp edge	None	6	12
	T33GUR NK2020	Carbide M20	Honing edge	None	6	12
	T33GUR NK3030	Carbide M20	Honing edge	TiN	6	12
	T33GUR NK5050	Carbide K10	Sharp edge	TiN	6	12
	T33GUR NK6060	Carbide M20	Honing edge	TiAlN	6	12
	T33GUR NK8080	Carbide K10	Sharp edge	TiAlN	6	12

Economical Milling Cutters ! Selectable R0.2, R0.4, and R0.8 nose insert and usable 4-corners



Shoulder Milling (NT type)

Shurillin

The high feed by multi-blade Capable of high-speed cutting!

■Body

Model. No.	blades	Dimensions (mm)					Weight (g)
		φD	φd	L	ℓs	ℓn	
NC2-1620	2	20	16	100	80	20	152
NC3-2530	3	30	25	105	80	25	394
NC4-3240	4	40	32	105	80	25	656
NC5-3250	5	50	32	105	80	25	752

※ Insert is not equipped as standard accessories. Please order separately
※ Clamp screw, and wrench are supplied as standard accessories

■Cutting Conditions

Material	Material Model / Feed per blade (fz)	NK1010	NK2020	NK3030	ZB01H
		Cutting speed (m / min)			
General Steel	0.08~0.2		100~200	100~200	200~250
Alloy Steel	0.08~0.2		100~200	100~200	200~250
Stainless Steel	0.08~0.2		100~150	100~150	
Aluminum,Resin,	0.08~0.3	150~400			
Castings	0.08~0.2		100~200	100~200	

● According to workpiece shape, clamp condition and cutting volume, the cutting condition will have to be adjusted.
● You have been to the workpiece by recommended Insert.

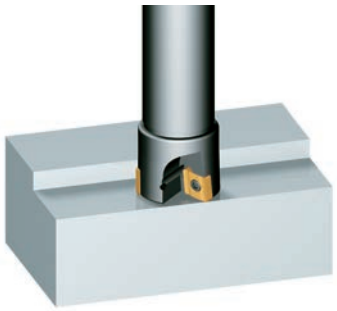
[Shoulder Milling (NT)]

■ Body : NC3-2530
■ Insert : C32GUR-0.8R NK3030

- Material·····SUS304
- Work length·····300mm
- Rotation Speed···2,000r.p.m
- Feed (X-axis)····800mm/min
- Cutting Depth····1mm

Result

Good!
No secondary burrs and no chattering process

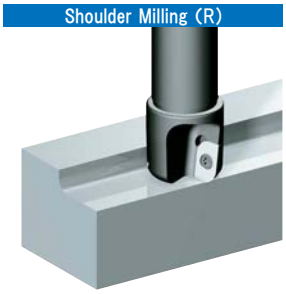


■ Insert

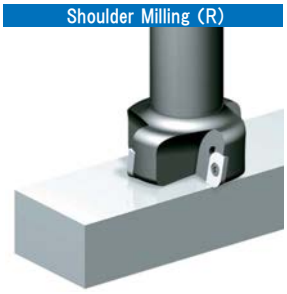
Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
〈C32GUR〉 R0.2/R0.4/R0.8	C32GUR-0.2R NK2020	Carbide M20	Honing edge	None	4	12
	C32GUR-0.4R NK2020	Carbide M20	Honing edge	None	4	12
	C32GUR-0.8R NK2020	Carbide M20	Honing edge	None	4	12
	C32GUR-0.2R NK1010	Carbide K10	Sharp edge	None	4	12
	C32GUR-0.2R NK3030	Carbide M20	Honing edge	TiN	4	12
	C32GUR-0.4R NK3030	Carbide M20	Honing edge	TiN	4	12
	C32GUR-0.8R NK3030	Carbide M20	Honing edge	TiN	4	12
〈C32MOR〉 R0.8	C32MOR-0.8R ZB01H	Cermet	Honing edge	None	4	12

Sumicco / Dekasumi

Shoulder Milling (R)



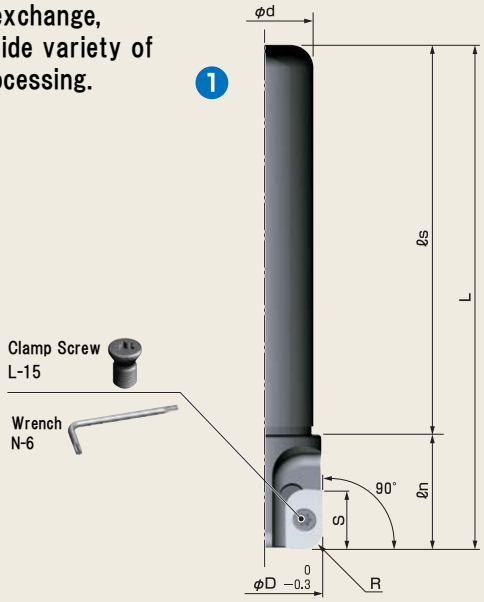
Shoulder Milling (R)



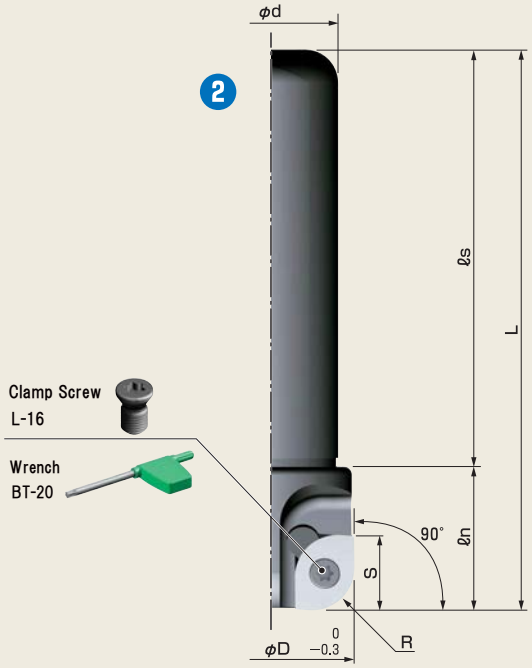
!! Corner R processing

- by the chip exchange, It allows a wide variety of Corner R processing.

1



2



■Body

Product name	Model No.	Fig.	blades	Dimensions (mm)						Inserts	Weight (g)
				φD	φd	L	ℓs	ℓn	S		
Sumicco	SK25-30ASR	1	2	30	25	130	100	30	15	A52GNR-0.5R～2.5R	478
	SK25-30ASRL	1	2	30	25	200	170	30	15	A52GNR-0.5R～2.5R	748
	SK25-30ALR	1	2	30	25	130	100	30	15	A52GNR-2.5R～5R	474
	SK25-30ALRL	1	2	30	25	200	170	30	15	A52GNR-2.5R～5R	746
	SK32-60ASR	1	4	60	32	105	80	25	15	A52GNR-0.5R～2.5R	798
	SK32-60ASRL	1	4	60	32	175	150	25	15	A52GNR-0.5R～2.5R	1,240
	SK32-60ALR	1	4	60	32	105	80	25	15	A52GNR-2.5R～5R	784
	SK32-60ALRL	1	4	60	32	175	150	25	15	A52GNR-2.5R～5R	1,240
	SK32-80ASR	1	4	80	32	105	80	25	15	A52GNR-0.5R～2.5R	1,100
	SK32-80ASRL	1	4	80	32	175	150	25	15	A52GNR-0.5R～2.5R	1,560
	SK32-80ALR	1	4	80	32	105	80	25	15	A52GNR-2.5R～5R	1,120
	SK32-80ALRL	1	4	80	32	175	150	25	15	A52GNR-2.5R～5R	1,550
Dekasumi	DC32-40ASR	2	2	40	32	135.0	100	35.0	18.1	ADEW19T3-5R～7R	820
	DC32-40ASRL	2	2	40	32	185.0	150	35.0	18.1	ADEW19T3-5R～7R	1,140
	DC32-40ALR	2	2	40	32	134.6	100	34.6	17.6	ADEW19T3-8R～10R	813
	DC32-40ALRL	2	2	40	32	184.6	150	34.6	17.6	ADEW19T3-8R～10R	1,140

※ Insert is not equipped as standard accessories. Please order separately
※ Clamp screw, and wrench are supplied as standard accessories

■Cutting Conditions

Sumicco

Material \ Material Model	NK1010	NK2020
Material / Feed per blade (fz)	Cutting speed (m / min)	
General Steel	0.1～0.2	100～150
Alloy Steel	0.1～0.2	100～150
Stainless Steel	0.1～0.2	80～120
Aluminum,Resin,	0.1～0.3	250～600
Castings	0.1～0.2	80～150

● Work shape, clamping state, tool protrusion length, please adjust the conditions by cutting amount
● You have been to the workpiece by recommended Insert.

Dekasumi

Material \ Material Model	NK1010	NK2020	NK6060
Material / Feed per blade (fz)	Cutting speed (m / min)		
General Steel	0.1～0.2	100～150	150～200
Alloy Steel	0.1～0.2	100～150	150～200
Stainless Steel	0.1～0.2	80～120	120～160
Aluminum,Resin,	0.1～0.3	250～600	
Castings	0.1～0.2	80～150	

● Work shape, clamping state, tool protrusion length, please adjust the conditions by cutting amount
● You have been to the workpiece by recommended Insert.

Processing Example Sumicco

[Shoulder Milling (R3)]

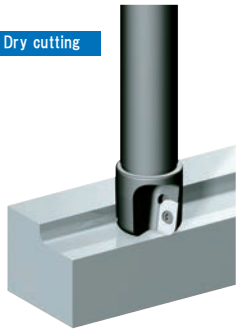
- Body : SK25-30ALR
- Insert : A52GNR-3R NK2020

- Material·····SKD11
- Work length·····200mm
- Rotation Speed···1,600r.p.m
- Feed (X-axis)····320mm/min
- Down cut air blow
- Cutting Oil····None

Result

Good!
No secondary burrs and
no chattering process

Dry cutting



Processing Example Dekasumi

[Shoulder Milling (R10)]

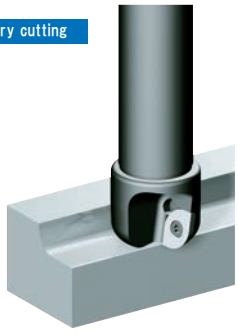
- Body : DC32-40ALR
- Insert : ADEW 19T3-R NK2020

- Material·····S50C
- Rotation Speed···1,500r.p.m
- Feed (X-axis)····450mm/min
- Cutting Depth····11mm
- Cutting Oil····None

Result

Good!
No secondary burrs and
no chattering process

Dry cutting



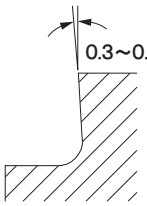
⚠ Cautions

Sumicco
ASR Type(R0.5～R2.5)

Sumicco
ALR Type(R2.5～R5)

Dekasumi
ASR Type(R5～R7)

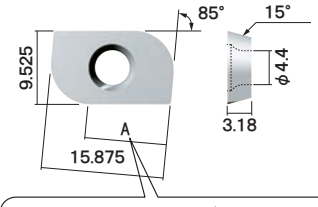
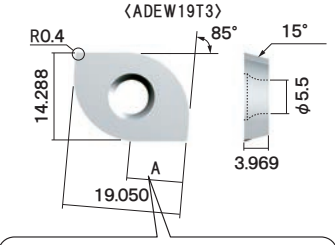
Dekasumi
ALR Type(R8～R10)



(Sumicco-Dekasumi are common.)

- Please choose the body to match the Insert to be used.
- The peripheral cutting edge have about 0.3～0.5° back taper (Sumicco and Dekasumi are same)

Insert

Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
●Sumicco ※ R0.5 l stocks in size. 〈A52GNR〉  ■Blade length of the Insert (l except nose R)	A52GNR-0.5R NK1010 A52GNR-1R NK1010 A52GNR-1.5R NK1010 A52GNR-2R NK1010 A52GNR-2.5R NK1010 A52GNR-3R NK1010 A52GNR-3.5R NK1010 A52GNR-4R NK1010 A52GNR-4.5R NK1010 A52GNR-5R NK1010	Carbide K10	Sharp edge	None	2	12
	A52GNR-0.5R NK2020 A52GNR-1R NK2020 A52GNR-1.5R NK2020 A52GNR-2R NK2020 A52GNR-2.5R NK2020 A52GNR-3R NK2020 A52GNR-3.5R NK2020 A52GNR-4R NK2020 A52GNR-4.5R NK2020 A52GNR-5R NK2020	Carbide M20	Honing edge	None	2	12
● Dekasumi ※ R1 l stocks in size. 〈ADEW19T3〉  ■Blade length of the Insert (l except nose R)	ADEW19T3-5R NK1010 ADEW19T3-6R NK1010 ADEW19T3-7R NK1010 ADEW19T3-8R NK1010 ADEW19T3-9R NK1010 ADEW19T3-10R NK1010	Carbide K10	Sharp edge	None	2	4
	ADEW19T3-5R NK2020 ADEW19T3-6R NK2020 ADEW19T3-7R NK2020 ADEW19T3-8R NK2020 ADEW19T3-9R NK2020 ADEW19T3-10R NK2020	Carbide M20	Honing edge	None	2	4
	ADEW19T3-5R NK6060 ADEW19T3-6R NK6060 ADEW19T3-7R NK6060 ADEW19T3-8R NK6060 ADEW19T3-9R NK6060 ADEW19T3-10R NK6060	Carbide M20	Honing edge	TiAlN	2	4

■Blade length of the Insert (l except nose R)

Model.No.	A
0.5R	15
1R	14.4
1.5R	13.9
2R	13.3
2.5R	12.8
3R	12.2
3.5R	11.7
4R	11.1
4.5R	10.5
5R	10

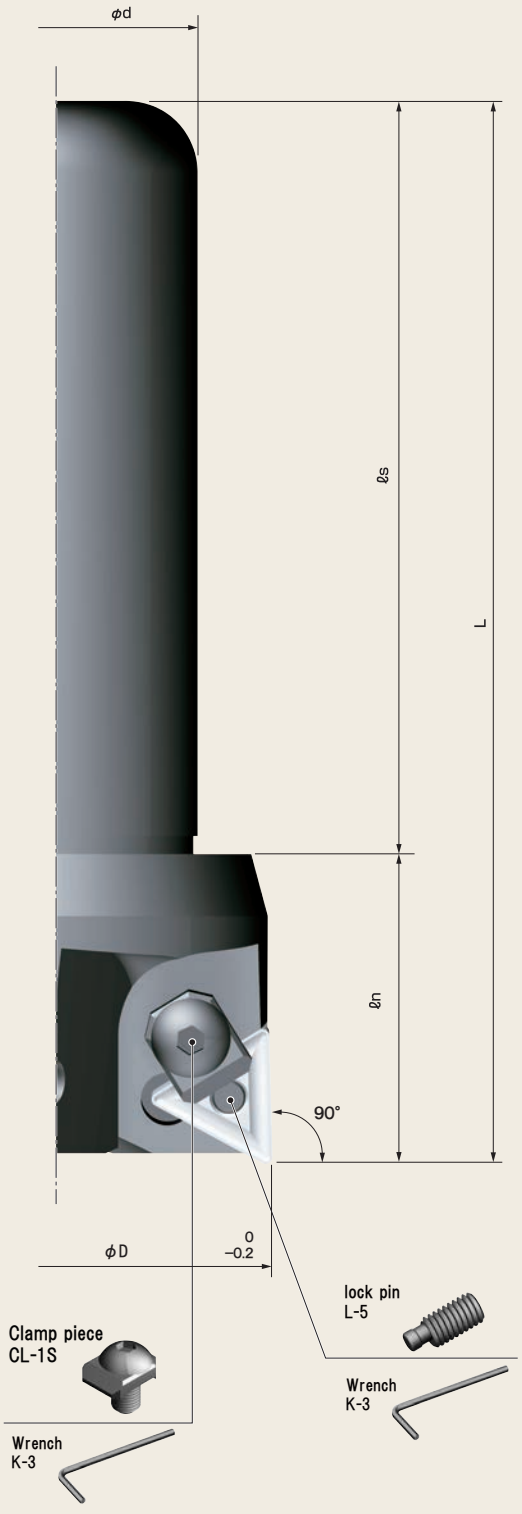
■Blade length of the Insert (l except nose R)

Model.No.	A
R5	13.2
R6	12
R7	11
R8	9.8
R9	8.7
R10	7.7

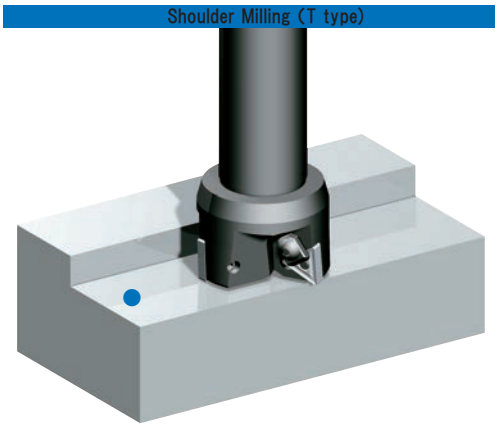
Skat Cut

Right angle processing!

- The back and from corners are usable due to nagative/positive Insert
- Durability has been increased due to the double clamp mechannism



Shoulder Milling (T type)



Processing Example

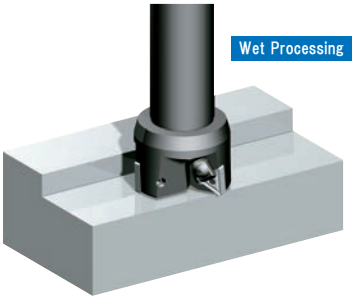
[Shoulder Milling]

- Body : NK9050T
- Insert : T33GURNK1010
- Material·····A5052
- Rotation Speed···6,000r.p.m
- Feed (X-axis)····1,200mm/min
- Cutting Depth····2mm

Result

Good!
No secondary burrs and
no chattering process

Wet Processing



Cutting Conditions

T33MOZ

Material	Material Model	NK2001	NK1010	NK2020	NK3030	NK6060
		Cutting speed (m / min)				
General Steel	0.1～0.3	200～220		150～180	150～200	
Alloy Steel	0.1～0.3	200～220		150～180	150～200	
Stainless Steel	0.1～0.25			120～160	120～180	150～200
Aluminum, Resin,Brass						
Castings	0.1～0.3	200～220 ※FCD	150～180			

- Our original Insert have "chamfereed nose"which ensure a good surface finishing even feed speed per blade are increased
- Yellow marked condition is recommended for the material listed

T33MOR

Material	Material Model	NK2001	NK1010	NK2020	NK3030	NK6060
	Feed per blade (fz)	Cutting speed (m / min)				
General Steel	0.1～0.2	200～220		150～180	150～220	
Alloy Steel	0.1～0.2	200～220		150～180	150～220	
Stainless Steel	0.1～0.15			120～160	150～180	150～200
Aluminum, Resin,Brass						
Castings	0.1～0.2	200～220 ※FCD	150～180			

- Original Inser Insert breaker realize a sharp processing. Insert nose chamfered minimize cutting resistance
- Yellow marked condition is recommended for the material listed

T33GUR

Material	Material Model	NK2001	NK1010	NK2020	NK3030	NK5050	NK6060	NK8080
	Feed per blade (fz)	Cutting speed (m / min)						
General Steel	0.08～0.2	200～220		150～180				
Alloy Steel	0.08～0.2	200～220		150～180				
Stainless Steel	0.08～0.2			120～180	150～180		150～220	150～220 ※SUS316
Aluminum, Resin,Brass	0.08～0.3		250～750			200～750		200～750
Castings	0.08～0.2	200～220 ※FCD						150～220

- Original Inser Insert breaker realize a sharp processing. Insert nose chamfered minimize cutting resistance
  Suitable for thin materials(easy to deform or chatter)processing.
- Yellow marked condition is recommended for the material listed

⚠ When mounting insert, please do not take reverse tightening.
Poor accuracy or finish or breakage of insert may be occurred due to the Eccentricity looking mechanism
When replacing insert, please make sure that the reserve tightening Was not made.

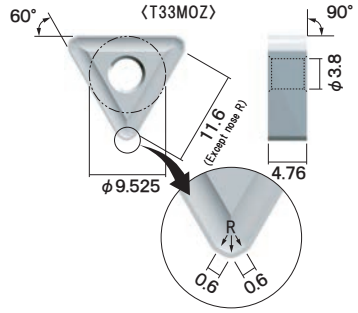
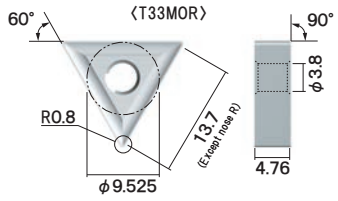
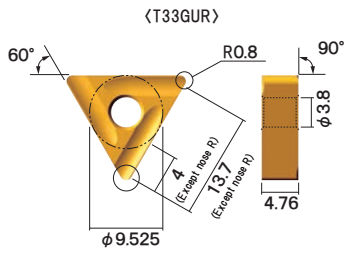
Body

Model. No.	blades	Dimensions (mm)					Weight (g)
		φD	φd	L	ℓs	ℓn	
NK9040T-20	3	40	20	120	85	35	0.52
NK9040T-25	3	40	25	120	85	35	0.64
NK9040T	3	40	32	120	85	35	0.7
NK9050T-20	3	50	20	120	85	35	0.54
NK9050T-25	3	50	25	120	85	35	0.68
NK9050T	3	50	32	120	85	35	0.8
NK9050T-42	3	50	42	120	85	35	1.1
NK9060T	3	60	32	120	85	35	0.95
NK9060T-42	3	60	42	120	85	35	1.3
NK9070T	3	70	32	120	85	35	1.2
NK9070T-42	3	70	42	120	85	35	1.4
NK9080T	3	80	32	120	85	35	1.2

※ Inset is not included. Please order spearately.

※ lock pin wrench clamp piece we have standard equipment.

Insert

Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
	T33MOZ NK2001	Cermet	Honing edge	None	6	12
	T33MOZ NK1010	Carbide K10	Sharp edge	None	6	12
	T33MOZ NK2020	Carbide M20	Honing edge	None	6	12
	T33MOZ NK3030	Carbide M20	Honing edge	TiN	6	12
	T33MOZ NK6060	Carbide M20	Honing edge	TiAℓN	6	12
	T33MOR NK2001	Cermet	Honing edge	None	6	12
	T33MOR NK1010	Carbide K10	Sharp edge	None	6	12
	T33MOR NK2020	Carbide M20	Honing edge	None	6	12
	T33MOR NK3030	Carbide M20	Honing edge	TiN	6	12
	T33MOR NK6060	Carbide M20	Honing edge	TiAℓN	6	12
	T33GUR NK2001	Cermet	Honing edge	None	6	12
	T33GUR NK1010	Carbide K10	Sharp edge	None	6	12
	T33GUR NK2020	Carbide M20	Honing edge	None	6	12
	T33GUR NK3030	Carbide M20	Honing edge	TiN	6	12
	T33GUR NK5050	Carbide K10	Sharp edge	TiN	6	12
	T33GUR NK6060	Carbide M20	Honing edge	TiAℓN	6	12
	T33GUR NK8080	Carbide K10	Sharp edge	TiAℓN	6	12

Easy Ordering

Product Number notation example simple order

① Base ・・・・・・・・・・ Aluminum Body
② Processing diameter ・・・・・ φ200mm
③ Blades ・・・・・・・・・・ 6Blade
④ Arm ・・・・・・・・・・・・ NS type
⑤ Base Color ・・・・・・・ RED

In the case of, please notation as described below with reference to the ①~⑤ of "Easy Order" below.

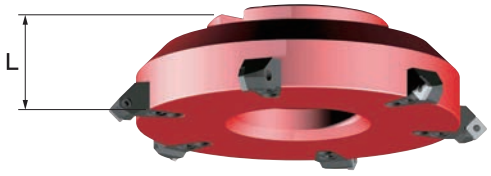
① Base	② Processing diameter		③ Blades	④ Arm		⑤ Base color	
KK	200	—	6	NS	—	RD	A

Product model number, "KK200-6NS-RD ※ This item only We will stock. It will be."

※ In the case of base only, please put the last A product model number.

① Base : Please choose the body type.

Model number notation ①・・・・・ Steel Body is "NK", aluminum body will be "KK".

Steel Body (NK type)	Aluminum body (KK type)
It's more commonly used for is, it will be the low-cost steel body.	It weighs 1/3 compared to steel cutters and are available at lower horsepower machines Aluminum body type.
	Or 

② Processing diameter (φ): Please choose the processing diameter from between the φ120~500.

Model number notation ②・・・・・ It will be 120-500.

③ Blade number : Please choose the number of blade from the 3-36 sheets.

※ blade number you can send quickly a lot made and feed speed.

Model number notation ③・・・・・ It will be 3-36.

④ Arm : Please choose the Arm type.

Model number notation ④・・・・・ It becomes the "NS" or "PS" or "NT".

NS type	PS type	NT type
FujiGen chattering is hardly out by its own negative-positive method, it can be a good cut into thin processing. Insert both sides is possible economic use of the "face processing Negachippu" is → [S type]	The "face processing Pojichippu" that enables optimum cutting in stainless by new materials and coating Inserts → [P Type]	The "shoulder processing" and → [T type]
 Or	 Or	

⑤ Base Color: Please choose only the aluminum Body Color.

※ Steel body color is only black.

Gold	Silver	Red	Blue	Black
GL	SV	RD	BL	BK

Model number notation ⑤・・・・・ Steel Body is "BK"
Aluminum body will be "GL" or "SV" or "RD" or "BL" or "BK".

According to the machining and the size of the customer's necessity will be provided!

Conventional nice cut series that had been our patronage (arbor type)
It becomes the order system, now that it can be widely available.
A combination of the diameter and number of blades
You can order We wish you the customer. According to the machining and the size of the customer's necessity will be provided!

Weight Table

Body type	Steel Body				
Cutter diameter	φ120～φ140	φ150～φ190	φ200～φ240	φ250～φ290	φ300～φ340
Cutter height (L)	45	60		70	
Arbor diameter / Number of blades	25.4	38.1	50.8	47.625	
3	2.6kg	7.1kg	11.2kg	19.3kg	28.7kg
4	2.6kg	7.1kg	11.2kg	19.4kg	28.7kg
5	2.6kg	7.1kg	11.2kg	19.4kg	28.7kg
6	2.6kg	7.1kg	11.3kg	19.4kg	28.7kg
7	2.6kg	7.1kg	11.3kg	19.4kg	28.7kg
8	2.6kg	7.1kg	11.3kg	19.4kg	28.8kg
9	2.7kg	7.1kg	11.3kg	19.4kg	28.8kg
10		7.1kg	11.3kg	19.4kg	28.8kg
11		7.1kg	11.3kg	19.4kg	28.8kg
12		7.2kg	11.3kg	19.5kg	28.8kg
13			11.3kg	19.5kg	28.8kg
14			11.4kg	19.5kg	28.8kg
15			11.4kg	19.5kg	28.8kg
16				19.5kg	28.8kg
17				19.5kg	28.9kg
18				19.5kg	28.9kg
19				19.5kg	28.9kg
20				19.6kg	28.9kg
21				19.6kg	28.9kg
22					28.9kg
23					28.9kg
24					28.9kg
Body type	Aluminum body				
Cutter diameter	φ120～φ140	φ150～φ190	φ200～φ240	φ250～φ290	φ300～φ340
Cutter height (L)	45	60		70	
Arbor diameter / Number of blades	25.4	38.1	50.8	47.625	
3	1.0kg	2.6kg	4.1kg	7.0kg	10.4kg
4	1.1kg	2.7kg	4.1kg	7.1kg	10.4kg
5	1.1kg	2.7kg	4.2kg	7.1kg	10.5kg
6	1.1kg	2.7kg	4.2kg	7.1kg	10.5kg
7	1.2kg	2.8kg	4.2kg	7.2kg	10.5kg
8	1.2kg	2.8kg	4.3kg	7.2kg	10.6kg
9	1.2kg	2.8kg	4.3kg	7.2kg	10.6kg
10		2.9kg	4.3kg	7.3kg	10.6gk
11		2.9kg	4.4kg	7.3kg	10.6kg
12		2.9kg	4.4kg	7.3kg	10.7kg
13			4.4kg	7.4kg	10.7kg
14			4.5kg	7.4kg	10.7kg
15			4.5kg	7.4kg	10.8kg
16				7.5kg	10.8kg
17				7.5kg	10.8kg
18				7.5kg	10.9kg
19				7.6kg	10.9kg
20				7.6kg	10.9kg
21				7.6kg	11.0kg
22					11.0kg
23					11.0kg
24					11.1kg

※Cutter diameter, it will can offer to φ10 unit.
※Cutter diameter φ350 more Arbor size and other will necessary separately estimates.
※Arbor diameter, it is determined by the cutter diameter, the Company in accordance with the face mill arbor A type.

※ Depending on the cutter diameter, there are times when it is not possible to put a Number of blades of hope.
※ If you have any questions, please feel free to contact us. TEL. (06) 6911-3588

- can not be canceled after your order, please understand.
- for non-standard products, made to order products. Delivery times, each time please verify.

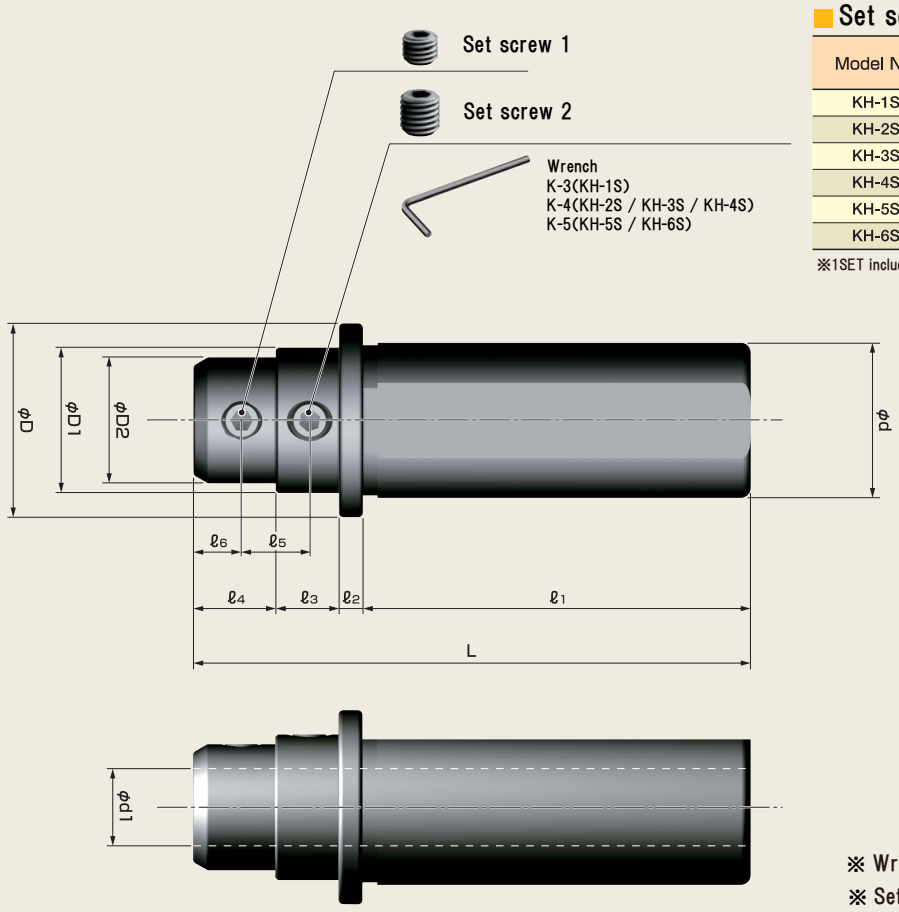
Cutting conditions to P.50
Insert for more information to P.51

Oilsshar

Use lathe

Greatly increase life of Insert !

- Suitable for Inner Diameter and boring process with Turning Center etc
- Sleeve with step structure cutting oil spread in whole places of insert during processing of inner diameter and the life of insert has been increasing more Than 20%.
- Adjustable screw is located at the front.
  You can easily adjust the Boring bar length without removing from holder.



Set screw

Model No.	Dimensions (mm)	
	Set screw 1	Set screw 2
KH-1S	M6×8	M6×10
KH-2S	M8×6	M8×6
KH-3S	M8×8	M8×8
KH-4S	M8×10	M8×8
KH-5S	M10×8	M10×8
KH-6S	M10×8	M10×10

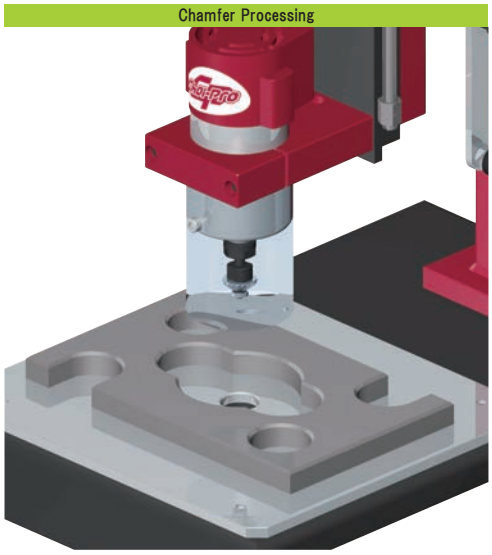
※1SET include (each of set screw-1 and set screw-2)

※ Wrench is not equipped as standard accessory
※ Set surew are supplied as standard accessory

Body

Model No.	Dimensions (mm)													Set surew
	φD	φD1	φD2	φd	φd1	L	ℓ1	ℓ2	ℓ3	ℓ4	ℓ5	ℓ6	F	
KJD32S08	40	28	24	32	8	115	80	5	15	15	14	10	30	KH-1S
KJD32S10	40	25	—	32	10	115	80	5	30	—	14	10	30	KH-2S
KJD32S12	40	25	—	32	12	115	80	5	30	—	14	10	30	KH-2S
KJD32S16	40	30	26	32	16	115	80	5	13	17	14	10	30	KH-2S
KJD32S20	40	32	—	32	20	115	80	5	30	—	13	11	30	KH-2S
KJD40S08	47	28	24	40	8	120	80	5	15	20	16	12	38	KH-1S
KJD40S10	47	32	28	40	10	120	80	5	15	20	15	13	38	KH-3S
KJD40S12	47	32	28	40	12	120	80	5	15	20	15	13	38	KH-3S
KJD40S16	47	34	31	40	16	120	80	5	15	20	15	13	38	KH-4S
KJD40S20	47	35	—	40	20	120	80	5	35	—	15	13	38	KH-5S
KJD40S25	48	40	—	40	25	120	80	15	25	—	17.5	15	38	KH-6S

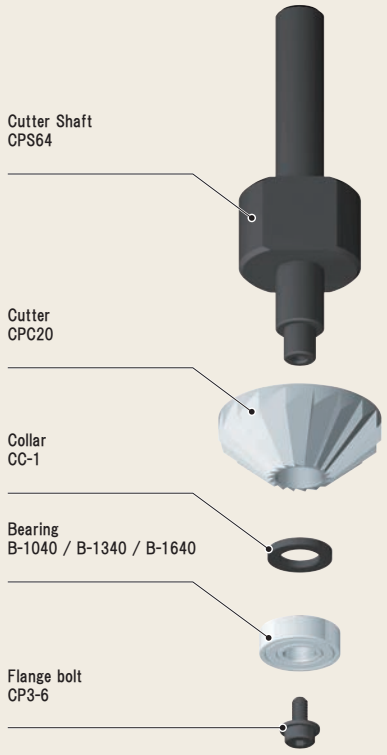
Chamfer Processing



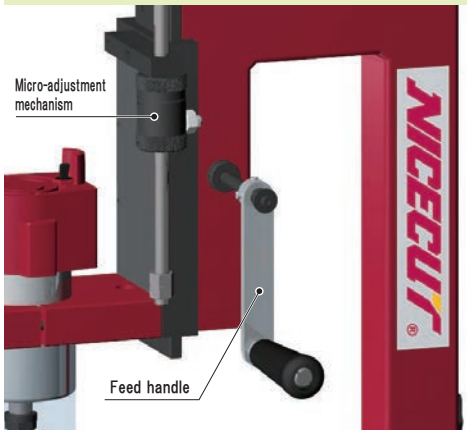
High Rotation Motor & Multi-Blade Cutter !

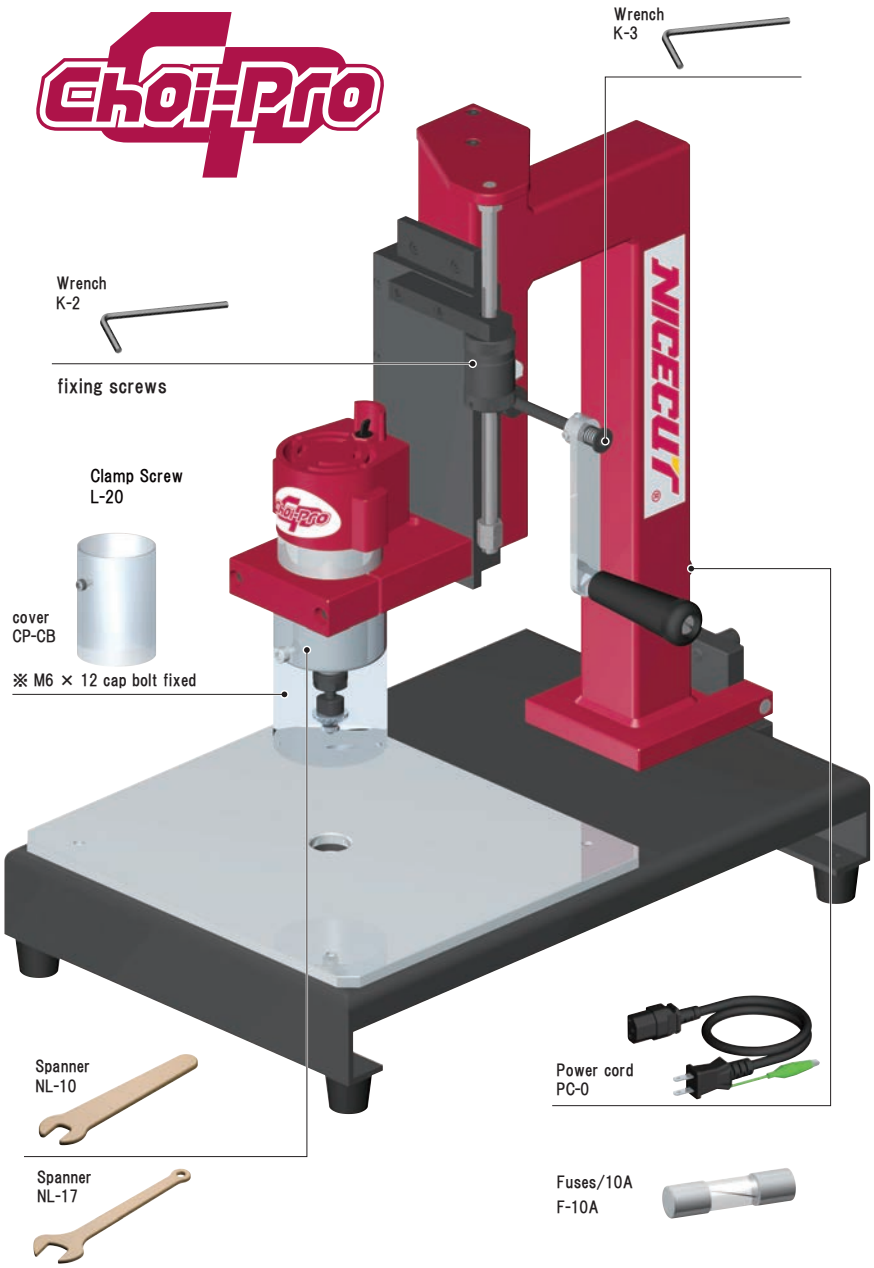
- Combination of High Rotation Moator, Multi- Blade Cutter and Bearing Guide ensured smooth surface processing
- One spot hold Open-Close mechanism ensured simple inside chamfering process

Exclusive Cutter(mounted as standard accessory)



2 kings up/down adjustment mechanism can select smooth chamfering amount



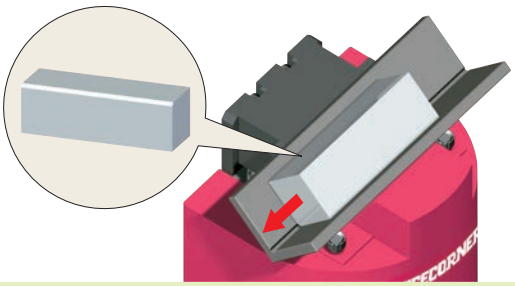


Body

Model. NO.	NEW CP-O
Power supply	100V
Generating	200W
Rotational speed	15,000r.p.m.
Max workpiece height	150
Dimension	W300×D480×H560
Weight	24kg

Nice-Corner F3

Corner Chamfering Process

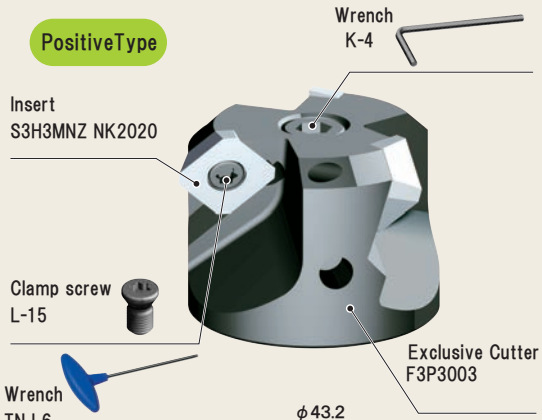


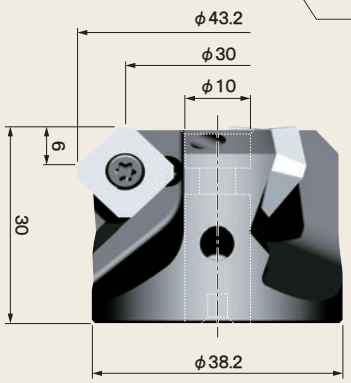
Slight-chamfering to C3(3mm)
※ Depending on work material.

- Realized high speed cutting with 8000 rpm
- You can find chamfering amount with a single glance and can adjust chamfering amount simply
- Chamfer processing without scratching materials can be realized by using linear slide guide (Option)

3-blades Exclusive Cutter built in(Standard)

PositiveType





(mm)

※ In case you need cutter only,please order insert separately

BODY

Model number	Fixed plate	Fixed plate (thin plate)	Slide plate	Slide plate (thin plate)
	F3	F3-250T	F3-400S	F3-400ST
Power Supply	AV100Vor120V/240V	AV100Vor120V/240V	AV100Vor120V/240V	AV100Vor120V/240V
Rotation speed	8,000r.p.m.	8,000r.p.m.	8,000r.p.m.	8,000r.p.m.
Dimension	W230×D250×H327	W230×D250×H327	W230×D400×H362	W230×D400×H362
Weight	23(Except power cable)	23(Except power cable)	28(Except power cable)	28(Except power cable)
Guide plate	F3L-250	F3L-250T	F3S-400	F3S-400T
Insert	S3H3MNZ NK2020	S3H3MNZ NK2020	S3H3MNZ NK2020	S3H3MNZ NK2020

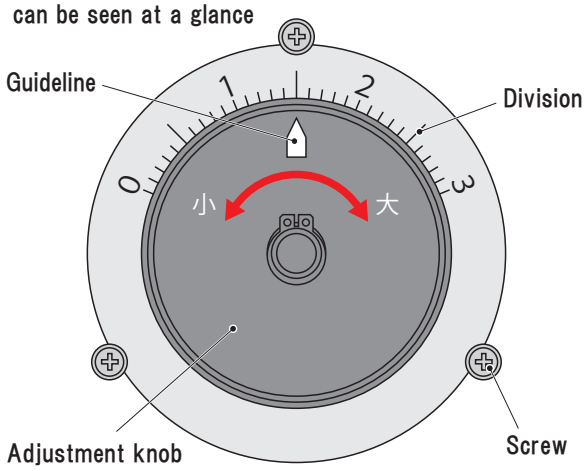
When mounting or replacing inserts, poor accuracy and breakage of inserts may occur die to reserve tightening and/or the eccentric locking system

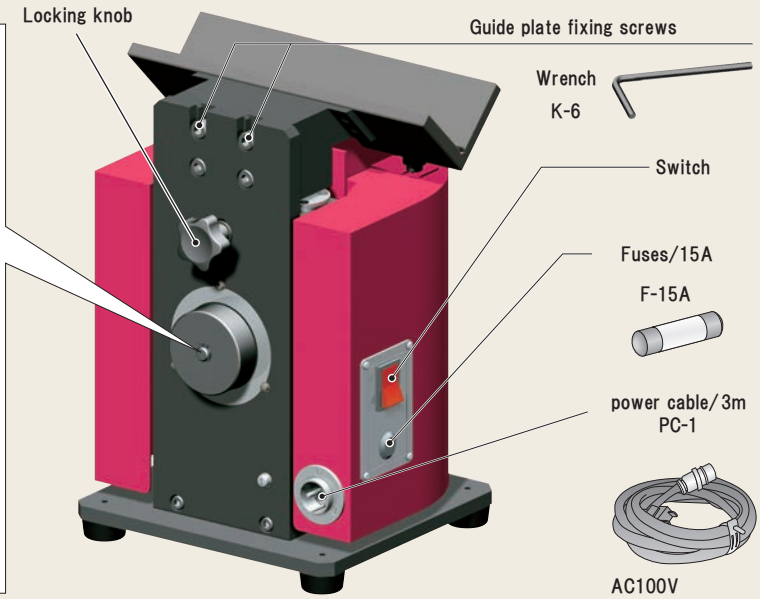
List of Standard Accessories

Product Name	Model number	Quantity
Exclusive cutter	F3P3003	1
Clamp screw	L-15	3
Wrench	K-4 / K-6 / N-6	One each
Fuses	F-15A	1 (one spare)
power cable	PC-1	1
Insert	S3H3MNZ NK2020	3

Adjustment knob

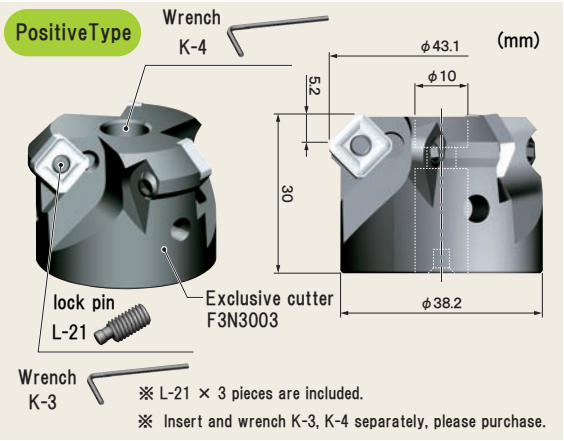
Easy adjustment by chamfering amount notation can be seen at a glance





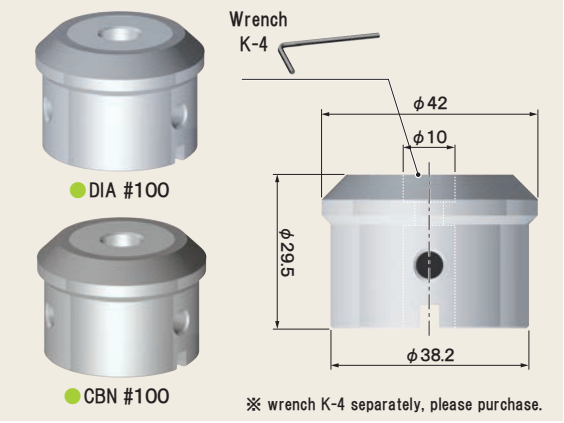
Exclusive Cutter (Options)

3Blade



※ L-21 × 3 pieces are included.
※ Insert and wrench K-3, K-4 separately, please purchase.

Exclusive use Electrodeposition grindstone (Options)



※ wrench K-4 separately, please purchase.

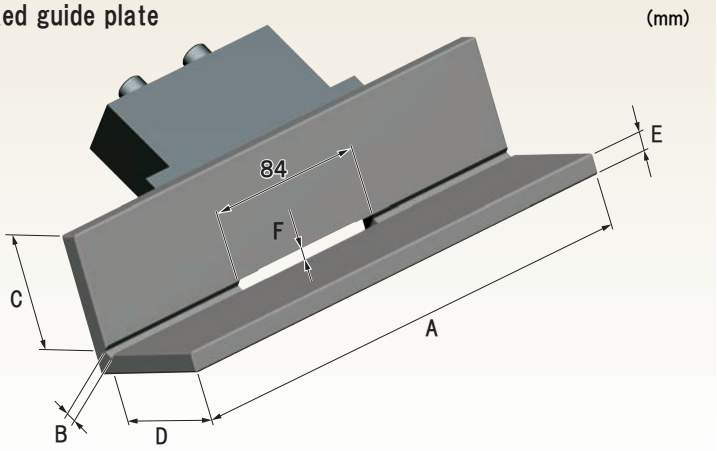
Subject cuttings	Model number
Ceramics General	F3T DIA
Glasses General	
Carbide material	
HSS Hardness	F3T CBN
HRC45 or more of steel	

Applicable Insert

Workpiece material	Recommended Insert	
	P-Type	N-Type
General steel	S3H3MNZ NK2020	S32MOZ NK2001
Alloy steel,SKD,SCM	S3H3MNZ NK2020	S32MOZ NK2001
Aluminum,resin,brass	S3H3GNZ NK1010	S32GUR NK1010
Cast steel,FC,FCD	S3H3GNZ NK1010	S32MOZ NK1010

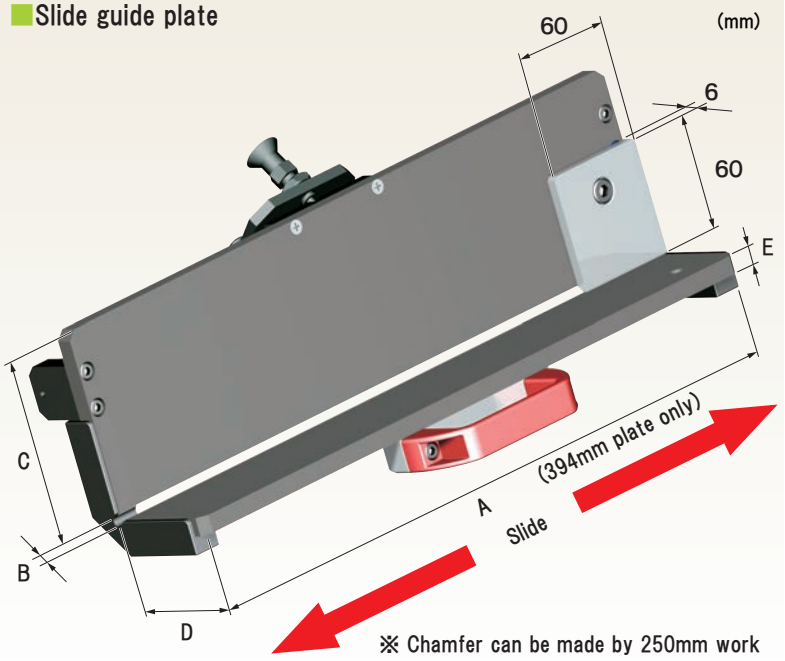
※ In case of Stainless Steel materials,blade retention time may become Short

Fixed guide plate



Model number	A	B	C	D	E	F	Maximum possible plate length	Maximum possible thickness	Maximum C chamfer
F3L-250	250mm	5mm	55mm	55mm	10mm	5.5mm	—	6mm or more	MAX C3
F3L-250T	250mm	2mm	55mm	55mm	10mm	2mm	—	2.5mm or more	MAX C1

Slide guide plate

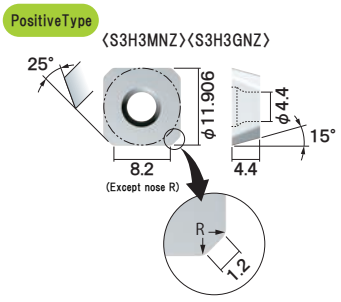


※ Chamfer can be made by 250mm work

Model number	A	B	C	D	E	F	Maximum possible plate length	Maximum possible thickness	Maximum C chamfer
F3S-400	400mm	5mm	100mm	60mm	10mm	5mm	250mm	6mm or more	MAX C3
F3S-400T	400mm	2mm	100mm	60mm	10mm	2mm	250mm	2.5mm or more	MAX C1

Insert

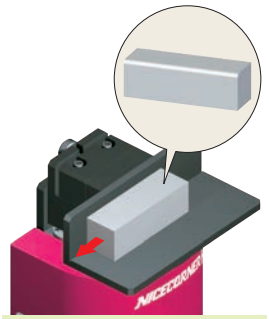
Figure	Model number	Material	Blade shape	Coating	Usable corners	Quantity per box
PositiveType ⟨S3H3MNZ⟩⟨S3H3GNZ⟩	S3H3MNZ NK2001	Cermet	Honing edge	None	4	12
	S3H3GNZ NK1010	Carbide K10	Sharp edge	None	4	12
	S3H3MNZ NK2020	Carbide M20	Honing edge	None	4	12
	S3H3MNZ NK6060	Carbide M20	Honing edge	TiAlN	4	12
	S3H3GNZ NK9090	Carbide K10	Sharp edge	None	4	12
	S3H3MNZ AC15D	Fine particles Carbide	Honing edge	AlCrN	4	12



⚠ Insert details for N-type F3N3003, please refer to P.86.

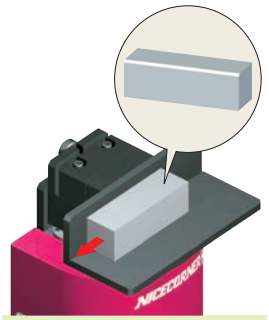
Nice-Corner FR

Corner Rounding Process



R1 to R=3(mm)
※ Depending on work material.

Corner Chamfering Process



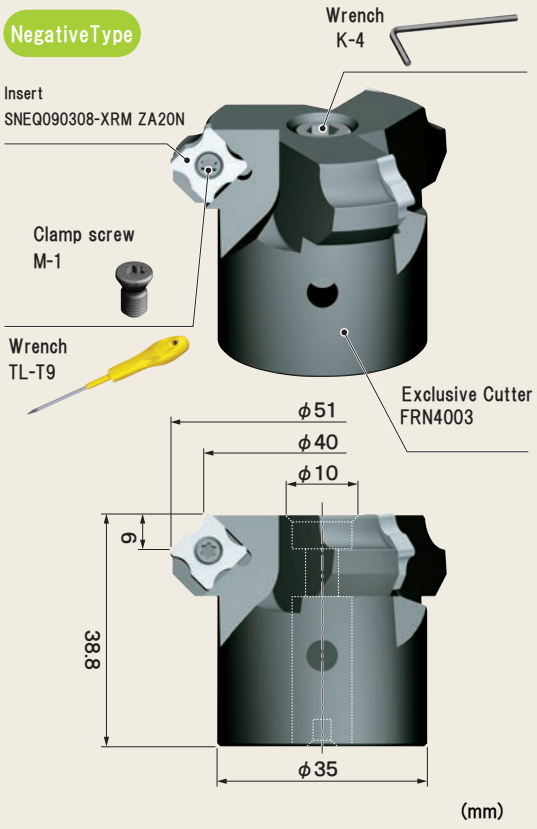
Slight-chamfering to C3(3mm)
※ Depending on work material.

- Realized high speed cutting with 8000 rpm
- You can find chamfering amount with a single glance and can adjust chamfering amount simply
- Chamfer processing without scratching materials can be realized by using linear slide guide (Option)

Shooter
Exhaust port newly designed eliminates Chip(powders) from machine(Body)

3-blades Exclusive Cutter built in(Standard)

NegativeType



※ In case you need cutter only,please order insert separately

BODY

Model number	Fixed plate	Slide plate
	FR	FR-400S
Power Supply	AV100Vor120V/240V	AV100Vor120V/240V
Rotation speed	8,000r.p.m.	8,000r.p.m.
Dimension	W240×D250×H360	W290×D400×H400
Weight	27kg(Except power cable)	32kg(Except power cable)
Guide plate	FRL-250	FRS-400
Insert	SNEQ090308-XRM ZA20N	SNEQ090308-XRM ZA20N

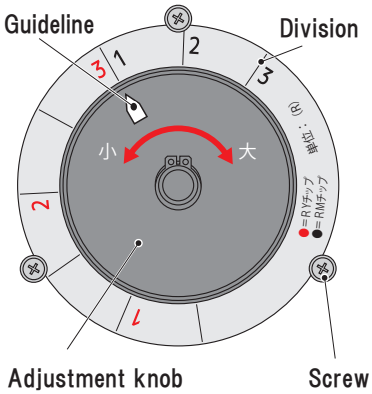
⚠ When mounting or replacing inserts, poor accuracy and breakage of inserts may occur die to reserve tightening and/or the eccentric locking system

List of Standard Accessories

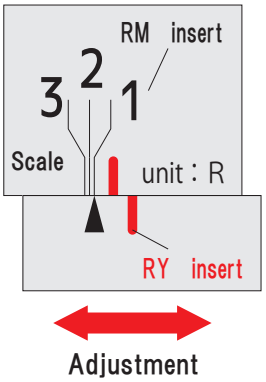
Product Name	Model number	Quantity
Exclusive cutter	FRN4003	1
Clamp screw	M-1	3
Wrench	K-4 / K-6 / TL-T9	One each
Fuses	F-15A	1 (one spare)
Power cable	PC-1	1
Insert	SNEQ090308-XRM ZA20N	3

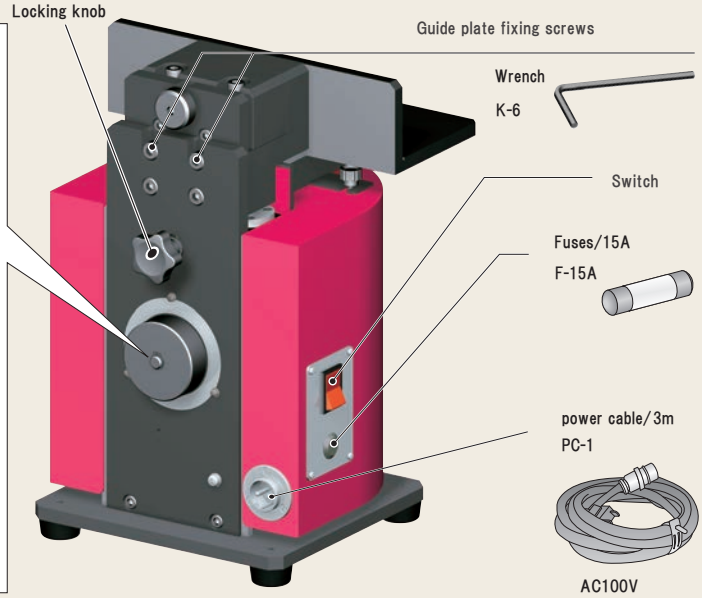
Adjustment of R (C) chamfering amount in two division has been simplified.

Z axis adjustment knob

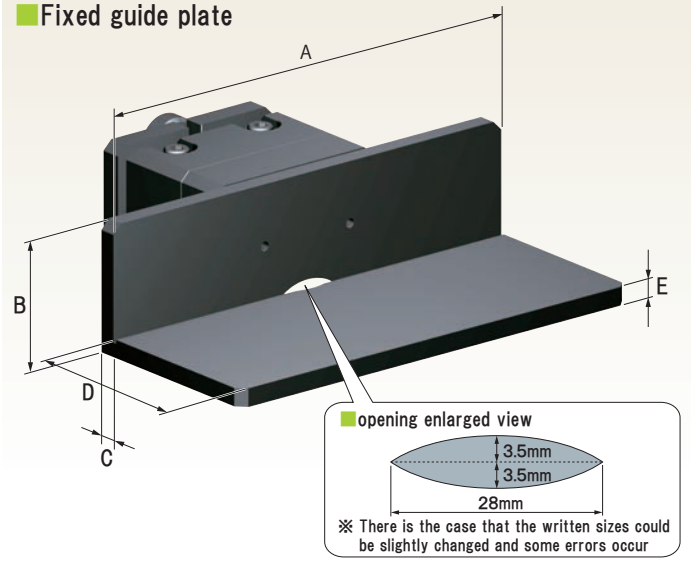


X axis adjustment knob





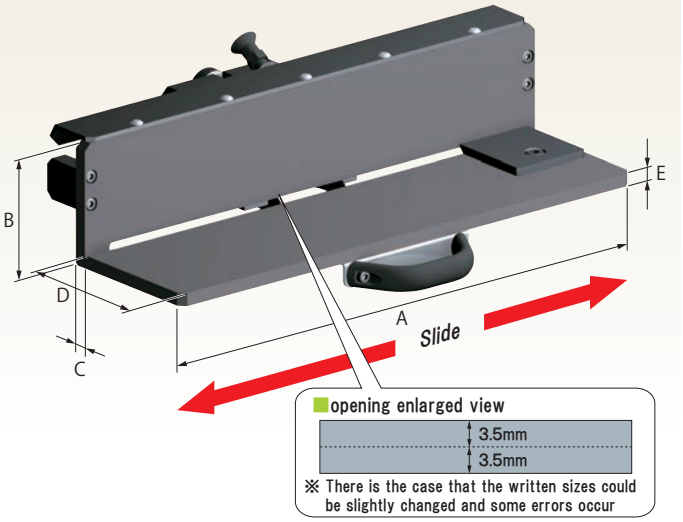
Fixed guide plate



Model number	A	B	C	D	E	Maximum C chamfer	Maximum R chamfer
FRL-250	250mm	70mm	10mm	100mm	10mm	MAX C3	MAX R3

※ workable thickness will be more than 4mm.

Slide guide plate ※ Chamfer can be made by 250mm work



Model number	A	B	C	D	E	Maximum C chamfer	Maximum R chamfer
FRS-400	400mm	90mm	10mm	105mm	10mm	MAX C3	MAX R3

※ workable thickness will be more than 4mm.

Applicable Insert

Workpiece material	Recommended Insert	
	For R chamfering	For C chamfering
General steel	SNEQ090308	S32MOZ NK2001
Alloy steel,SKD,SCM	SNEQ090308	S32MOZ NK2001
Aluminum,resin,brass	SNEQ090308	S32GUR NK1010
Castings,FC,FCD	SNEQ090308	S32MOZ NK1010

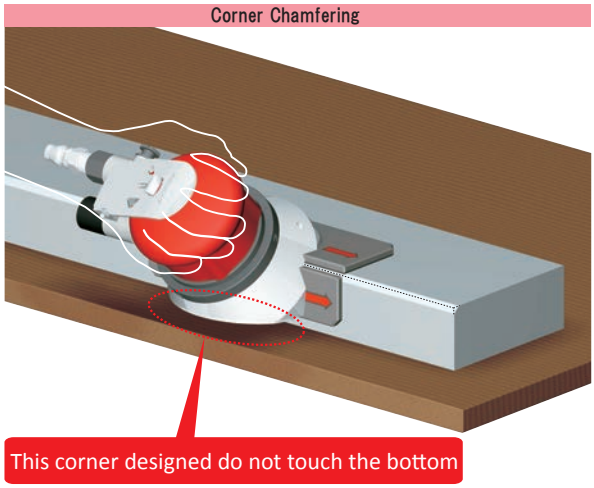
※ In case of Stainless Steel materials,blade retention time may become Short

Insert

Figure	Model number	Material	Blade shape	Coating	Usable corners	Quantity per box
〈SNEQ090308-□RY〉 90° R0.8 φ3.8 9.525 3.18 Is deviated R (4 corner use)	SNEQ090308-1RY ZA20N	Carbide M20	R1・2・3・4	None	4	12
	SNEQ090308-2RY ZA20N	Carbide M20	The Same R Each corner	None	4	12
	SNEQ090308-3RY ZA20N	Carbide M20	The Same R Each corner	None	4	12
	SNEQ090308-XRY ZA20N	Carbide M20	The Same R Each corner	None	4	12
〈SNEQ090308-□RM〉 90° R0.8 φ3.8 9.525 3.18 Center R (8 corner use)	SNEQ090308-1RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-2RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-3RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-XRM ZA20N	Carbide M20	R1・2・3・4	None	8	12
〈S32MOZ〉 90° φ9.525 φ3.8 6.8 (Except nose R) 3.18 0.8R 0.8	S32MOZ NK2001	Cermet	Honing edge	None	8	12
	S32MOZ NK2050	Cermet	Honing edge	None	8	12
	NEW S32MOZ AB01F	Cermet	Honing edge	AlCrN	8	12
	S32MOZ NK1010	Carbide K10	Sharp edge	None	8	12
	S32MOZ NK2020	Carbide M20	Honing edge	None	8	12
	S32MOZ NK3030	Carbide M20	Honing edge	TiN	8	12
	S32MOZ NK6060	Carbide M20	Honing edge	TiAlN	8	12
	S32MOZ AC15T	Fine particles Carbide	Honing edge	AlCrN	8	12
〈S32GUR〉 90° φ9.525 φ3.8 2.4 (Except nose R) R1.2 3.18 7.1 (Except nose R)	S32GUR NK2001	Cermet	Honing edge	None	8	12
	S32GUR NK1010	Carbide K10	Sharp edge	None	8	12
	S32GUR NK2020	Carbide M20	Honing edge	None	8	12
	S32GUR NK3030	Carbide M20	Honing edge	TiN	8	12
	S32GUR NK5050	Carbide K10	Sharp edge	TiN	8	12
	S32GUR NK6060	Carbide M20	Honing edge	TiAlN	8	12
	S32GUR NK8080	Carbide K10	Sharp edge	TiAlN	8	12

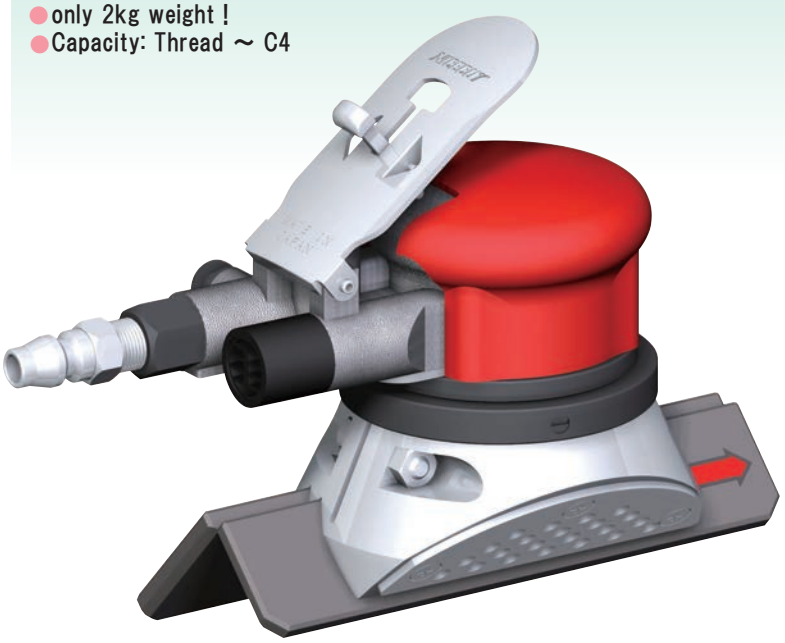
Han-Chan-man

Corner Chamfering



Unique and advanced Air operated Portable Handy Chamfering machine !

- only 2kg weight !
- Capacity: Thread ～ C4



Specification

Air Pressure	0.49～0.68MPa(5～7kg/cm²)
Non-Load Rotational	10,000r.p.m.
Air Consumption	0.19m³/min
Capacity	～C4
Work Thickness	more than 6mm
Weight	2kg

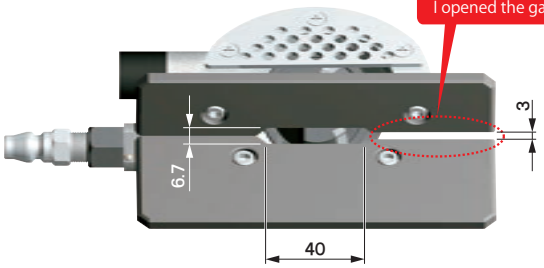
Processing Example

[Chamfering of one corner per 20m in the processing of 1C]

- Insert : SDMW11T4AFEN12 ZA20D
- Material····· SUS304

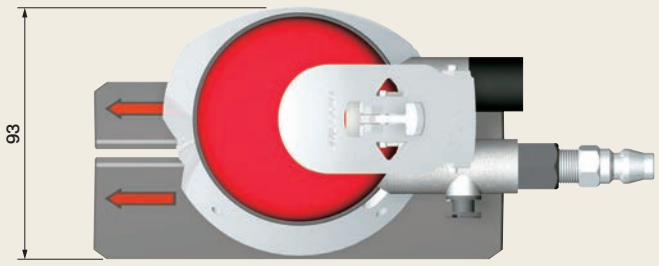
(mm)

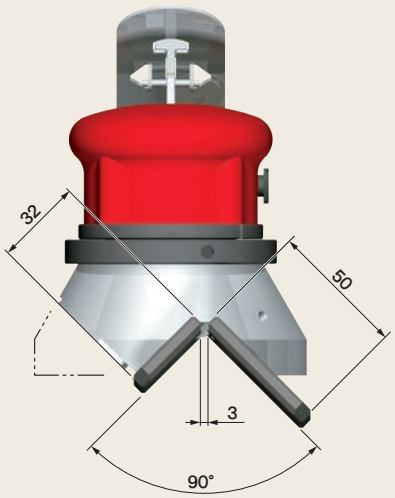
The Openings Enlarged Photo

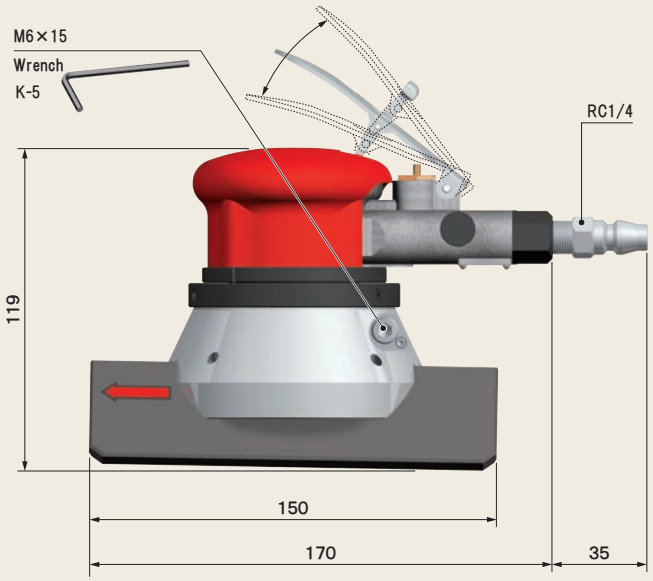


For burr-removal, we make a space Cutter area of Guide Plate groove is widen

※ The dimension could be little different







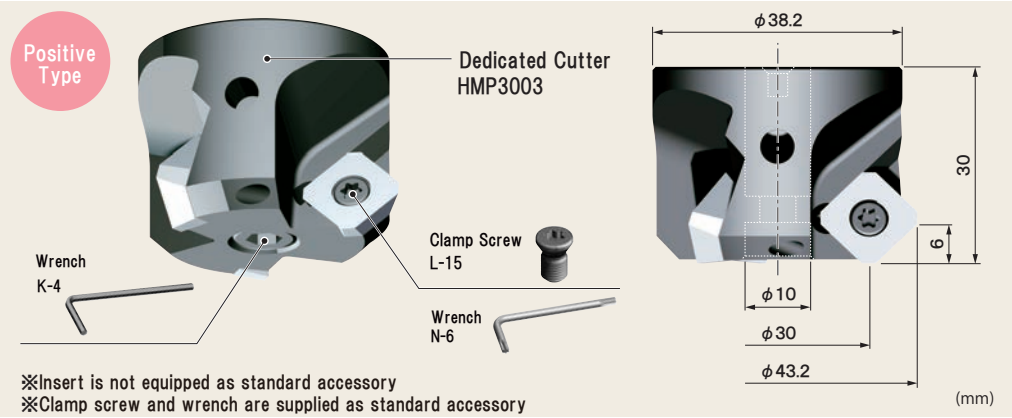
Body

Model No.	Blade	Dimensions(mm)	Guide plate overall length (mm)	Inserts	Weight
HAM4-150CP3003	3	W93×D205×H119	150	SDMW type or SDEW type	2kg

※ Insert is not equipped as standard accessory
※ Clamp screw and wrench are supplied as standard accessory

Standard Equipment

Dedicated Cutter (equipped with Body) 3Blade



※Insert is not equipped as standard accessory
※Clamp screw and wrench are supplied as standard accessory

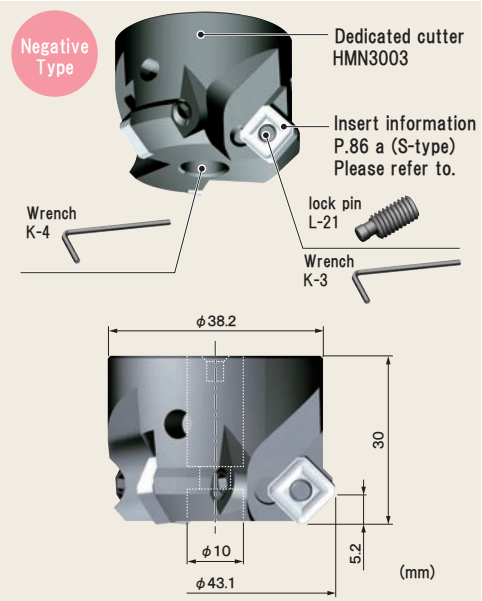
Accessories

Mini oil (one)

Model No.	MO-20

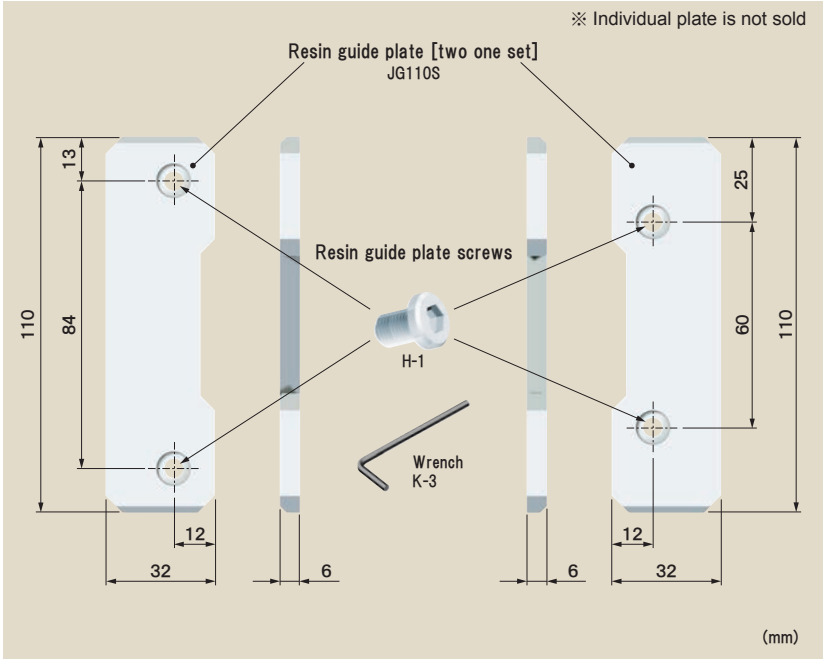
Options

Dedicated Cutter(option) 3Blade



※ Insert is not included. Please order spearately.
※ lock pin wrench we have standard equipment

Resin Guide Plate(Option)



Insert

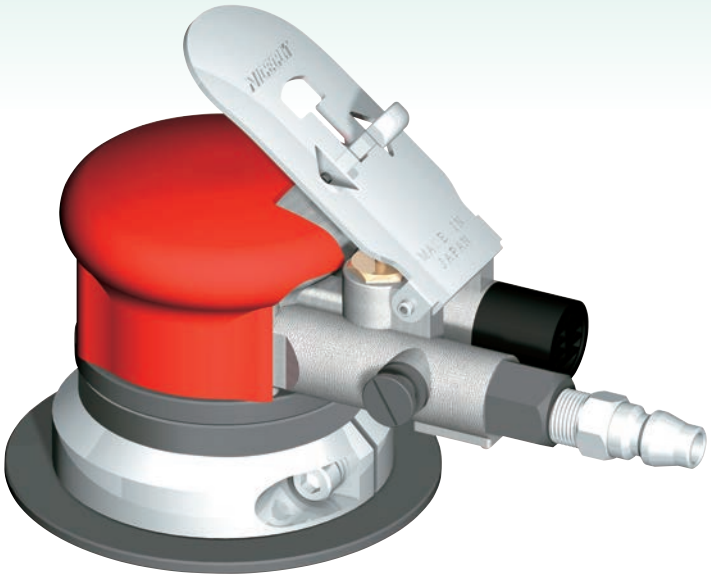
Figure	Model number	Material	Blade shape	Coating	Usable corners	Quantity per box
⟨SDMW11T4AFEN12⟩ ⟨SDEW11T4AFFN12⟩	SDMW11T4AFEN12 ZB01N	Cermet	Honing edge	None	4	10
	SDEW11T4AFFN12 ZA10D	Carbide K10	Sharp edge	None	4	10
	SDMW11T4AFEN12 ZA20D	Carbide M20	Honing edge	None	4	10
	SDEW11T4AFFN12 ZA10DL	Carbide K10	Sharp edge	None	4	10
	SDMW11T4AFEN12 AC15D	Fine particles Carbide	Honing edge	AlCrN	4	10

Han-Chan-man R

Round corner Chamfering

!! Round corner Chamfering machine Handy type Air-driven

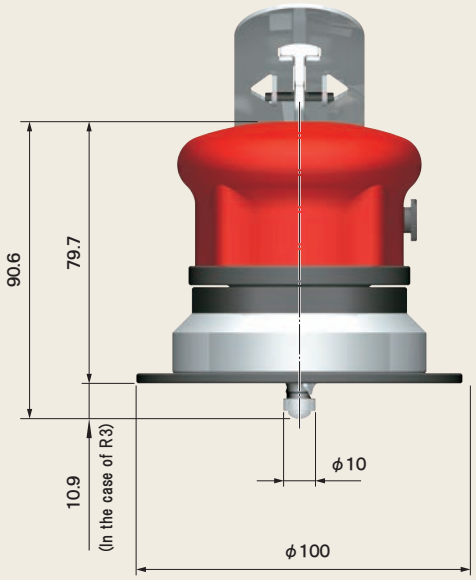
- Lightweight (about 1.3) It is possible to process up to R3 (C3) in the handy type.
- low-cost small Insert.

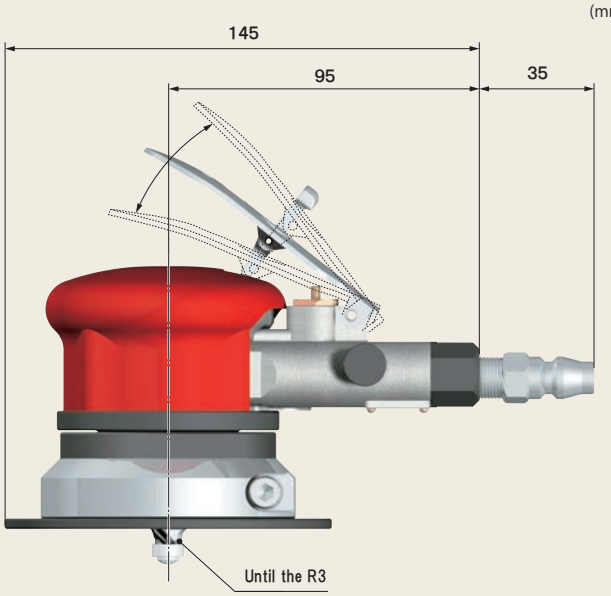


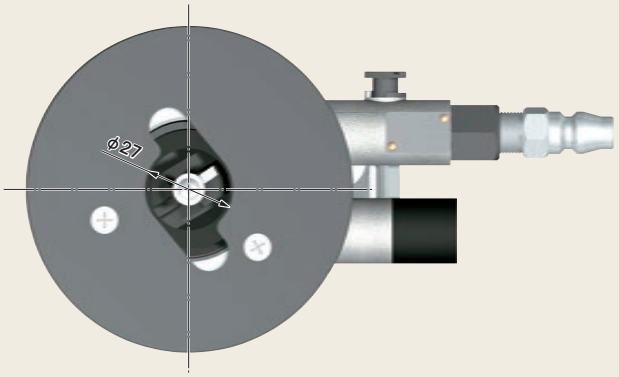
Specification

Air Pressure	0.49～0.68MPa(5～7f/cm²)
Non-Load Rotational	10,000r.p.m.
Air Consumption	0.19m³/min
Capacity	Until the R3 (～C3)
Work Thickness	12mm～
Weight	About 1.3kg

(mm)





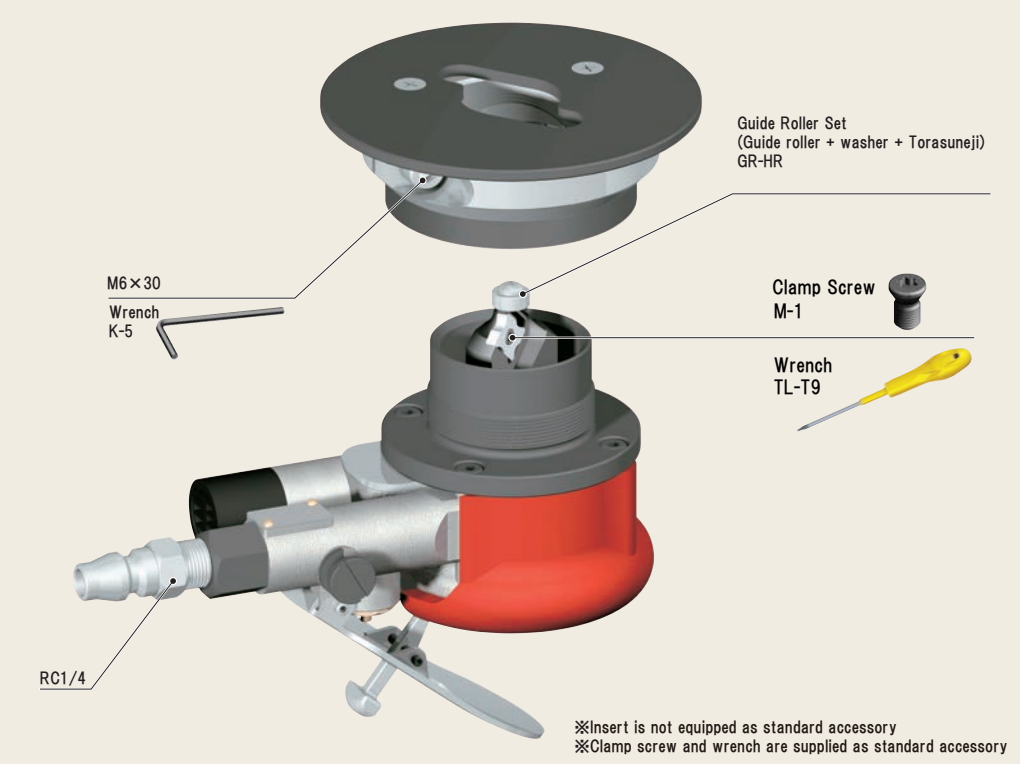


Body

Model No.	Blades	Dimensions(mm)	Inserts	Weight
HAM3R-100S	1	W100×D180×H90.6	SNEQ090308 / S32MOZ / S32GUR	1.3kg

※ Insert is not equipped as standard accessory
※ Clamp screw and wrench are supplied as standard accessory

Standard Equipment

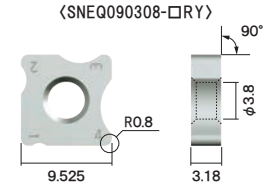
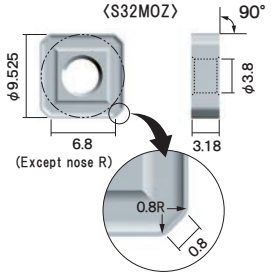
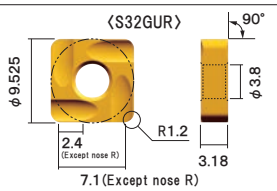


Accessory

Mini oil (one)

Model number	MO-20

Insert

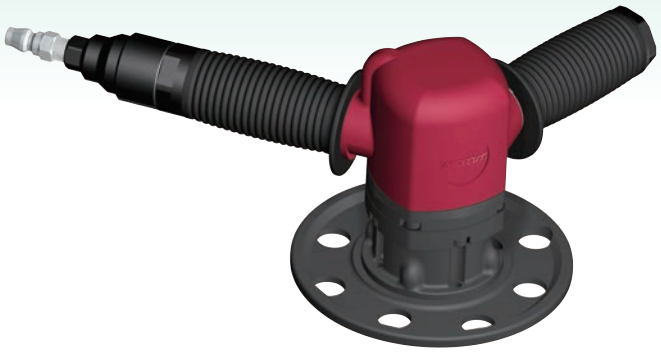
Figure	Model number	Material	Blade shape	Coating	Usable corner	Quantity per box
⟨SNEQ090308-□RY⟩ 	SNEQ090308-1RY ZA20N	Carbide M20	The Same R Each corner	None	4	12
	SNEQ090308-2RY ZA20N	Carbide M20	The Same R Each corner	None	4	12
	SNEQ090308-3RY ZA20N	Carbide M20	The Same R Each corner	None	4	12
	SNEQ090308-XRY ZA20N (R4 can not be used)	Carbide M20	R1・2・3・4	None	3	12
⟨S32MOZ⟩ 	S32MOZ NK2001	Cermet	Honing edge	None	8	12
	S32MOZ NK2050	Cermet	Honing edge	None	8	12
	NEW S32MOZ AB01F	Cermet	Honing edge	AlCrN	8	12
	S32MOZ NK1010	Carbide K10	Sharp edge	None	8	12
	S32MOZ NK2020	Carbide M20	Honing edge	None	8	12
	S32MOZ NK3030	Carbide M20	Honing edge	TiN	8	12
	S32MOZ NK6060	Carbide M20	Honing edge	TiAlN	8	12
	S32MOZ AC15T	Fine particles Carbide	Honing edge	AlCrN	8	12
⟨S32GUR⟩ 	S32GUR NK2001	Cermet	Honing edge	None	8	12
	S32GUR NK1010	Carbide K10	Sharp edge	None	8	12
	S32GUR NK2020	Carbide M20	Honing edge	None	8	12
	S32GUR NK3030	Carbide M20	Honing edge	TiN	8	12
	S32GUR NK5050	Carbide K10	Sharp edge	TiN	8	12
	S32GUR NK6060	Carbide M20	Honing edge	TiAlN	8	12
	S32GUR NK8080	Carbide K10	Sharp edge	TiAlN	8	12

Han-Chan-man R-HYPER

Round corner Chamfering

High-Power !!
Air operated Portable Handy Chamfering Machine

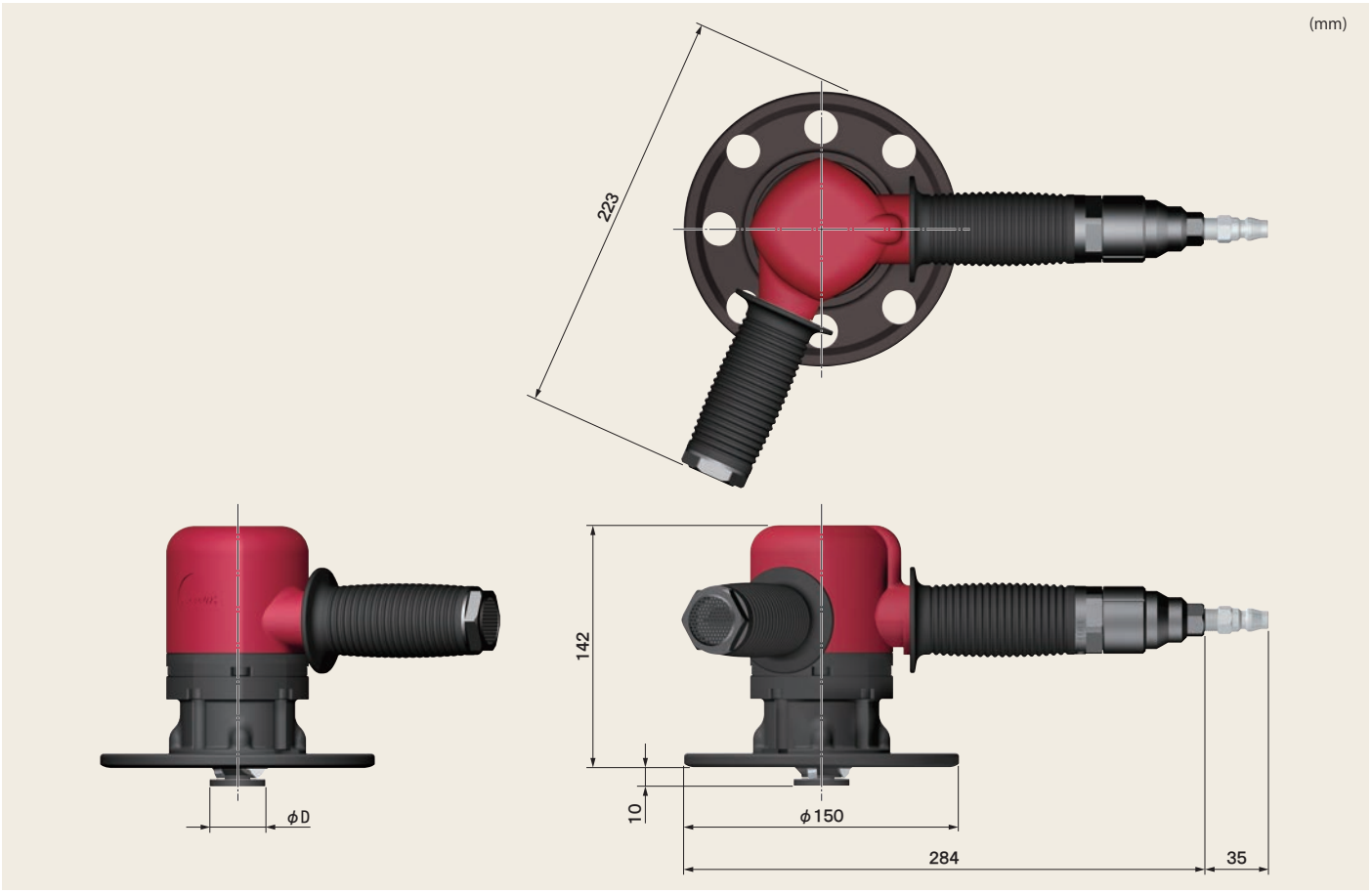
- Only 3.4kg weight Handy type
- Capacity: R3(C3), R4(C4), R5(C5)



Specification

Model number	HAM3R-150N	HAM4R-150N	HAM5R-150N
Air Pressure	0.49～0.68MPa(5～7f/cm²)		
Non-Load Rotational	10,000r.p.m.		
Air Consumption	0.96m³/min		
Capacity	Until the R3 (C3)	Until the R4 (C4)	Until the R5 (C5)
Work Thickness	12mm～		
Weight	About 3.4kg		

(mm)



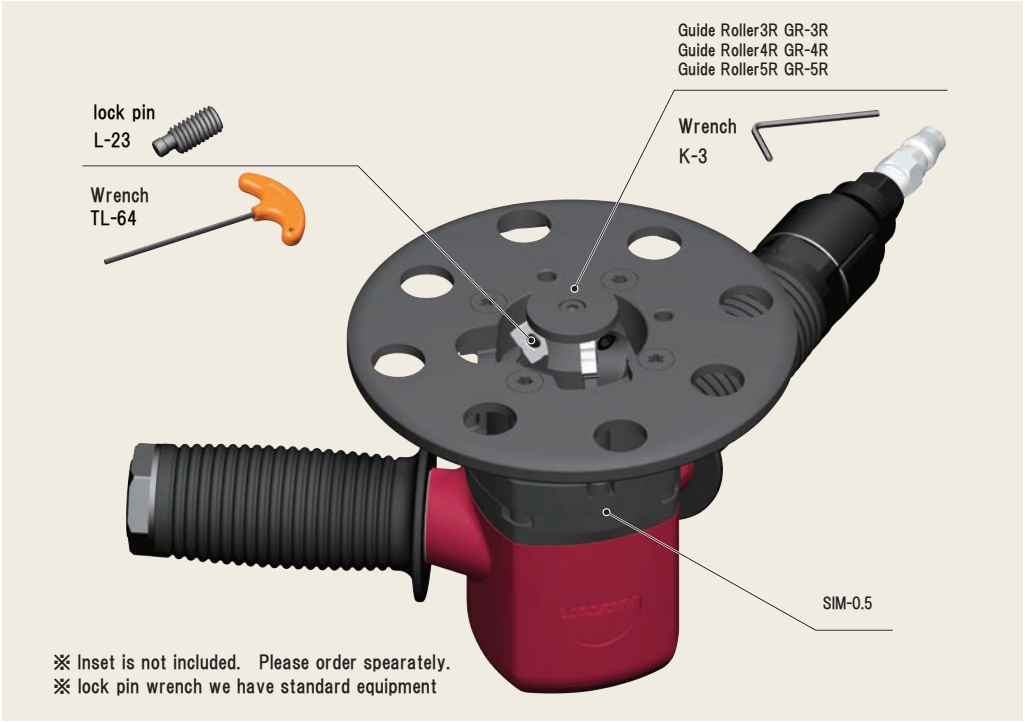
Body

Model No.	Blades	ϕD	Dimensions(mm)	Inserts	Weight
NEW HAM3R-150N	3	30.7	W223×D319×H142	N43GXR / N43MOZ / N43GUR	3.4
NEW HAM4R-150N	3	29.7	W223×D319×H142	N43GXR / N43MOZ / N43GUR	3.4
NEW HAM5R-150N	3	28.7	W223×D319×H142	N43GXR / N43MOZ / N43GUR	3.4

※ Insert is not equipped as standard accessory
※ Clamp screw and wrench are supplied as standard accessory

⚠ During the insert mounting, because of the eccentric lock system, and poor accuracy due to the reverse lock, may lead to insert damage.
During the insert replacement, please be sure to confirm whether the reverse lock is not.

Standard Equipment

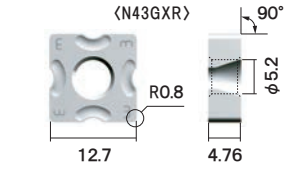
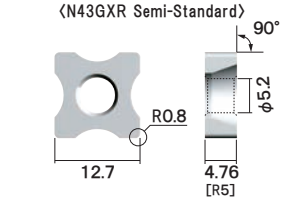
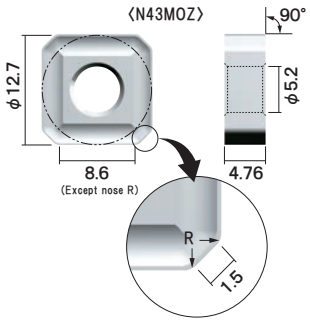
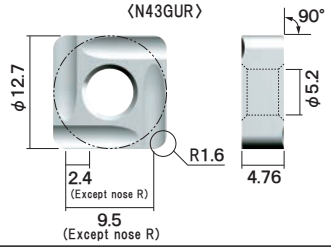


※ Inset is not included. Please order spearately.
※ lock pin wrench we have standard equipment

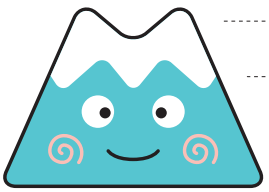
Accessory

Mini oil (one)

Model number	MO-20

Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
〈N43GXR〉  〈N43GXR Semi-Standard〉  ※ Semi-Standard Insert have no braker	N43GXR-3R NK2001	Cermet	The Same R Each corner	None	4	3/12
	N43GXR-4R NK2001	Cermet	The Same R Each corner	None	4	3/12
	N43GXR-3R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	N43GXR-4R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	N43GXR-3R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
	N43GXR-4R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
	N43GXR-5R NK2020 〈Semi-Standard〉	Carbide M20	The Same R Each corner	None	4	3/12
〈N43MOZ〉 	N43MOZ NK2001	Cermet	Honing edge	None	8	12
	N43MOZ NK1010	Carbide K10	Sharp edge	None	8	12
	N43MOZ NK2020	Carbide M20	Honing edge	None	8	12
	N43MOZ NK3030	Carbide M20	Honing edge	TiN	8	12
	N43MOZ NK6060	Carbide M20	Honing edge	TiAℓN	8	12
〈N43GUR〉 	N43GUR NK2001	Cermet	Honing edge	None	8	12
	N43GUR NK1010	Carbide K10	Sharp edge	None	8	12
	N43GUR NK2020	Carbide M20	Honing edge	None	8	12
	N43GUR NK3030	Carbide M20	Honing edge	TiN	8	12
	N43GUR NK6060	Carbide M20	Honing edge	TiAℓN	8	12
	N43GUR NK8080	Carbide M20	Honing edge	TiAℓN	8	12

MEMO



Basic Theory !!

Calculating formula of cutting speed

● Cutting speed (Vc) = $\frac{3.14 \times \text{cutter diameter (D)} \times \text{rotational speed (n)}}{1000}$

● Rotation speed (n) = $\frac{1000 \times \text{cutting speed (Vc)}}{\text{Cutter diameter (D)} \times 3.14}$

Rotational speed Simplified chart

(r.p.m.)

Cutter diameter(D)	Cutting speed (m/min)								
	30	100	120	150	180	200	220	250	300
10	955	3185	3822	4777	5732	6369	7006	7962	9554
20	478	1592	1911	2389	2866	3185	3503	3981	4777
30	318	1062	1274	1592	1911	2123	2335	2654	3185
40	239	796	955	1194	1433	1592	1752	1990	2389
50	191	637	764	955	1146	1274	1401	1592	1911
60	159	531	637	796	955	1062	1168	1327	1592
70	136	455	546	682	819	910	1001	1137	1365
80	119	398	478	597	717	796	876	995	1194
90	106	354	425	531	637	708	778	885	1062
100	380	318	382	478	573	637	701	796	955
120	80	265	318	398	478	531	584	663	796
130	73	245	294	367	441	490	539	612	735
150	64	212	255	318	382	425	467	531	637
160	60	199	239	299	358	398	438	498	597
180	53	177	212	265	318	354	389	442	531
200	48	159	191	239	287	318	350	398	478
270	35	118	142	177	212	236	259	295	354
315	30	101	121	152	182	202	222	253	303

※ numeric data decimal point below It is expressed in rounding off.

Feed formula

● Feed per blade (fz) = $\frac{\text{Table feed (Vf)}}{\text{rotational speed (n)} \times \text{Blades(Z)}}$

● Table feed (F) = rotational speed (n)×Blades(Z)×Feed per blade (fz)

Inserts

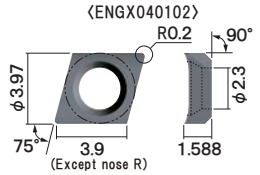
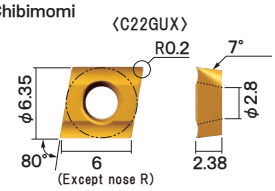
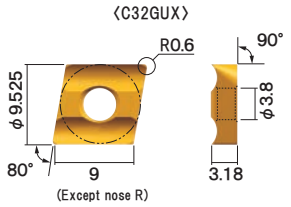
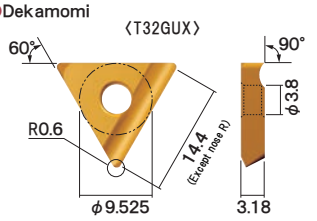
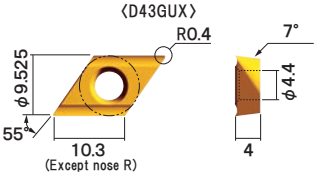
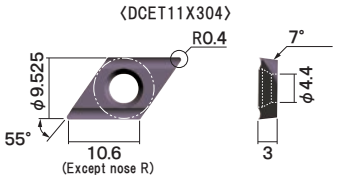
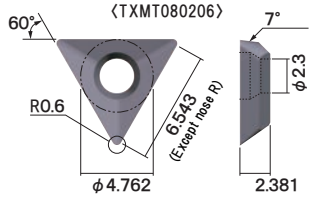
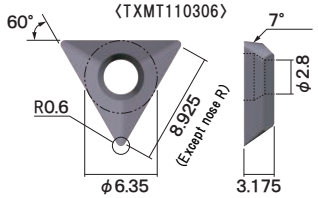
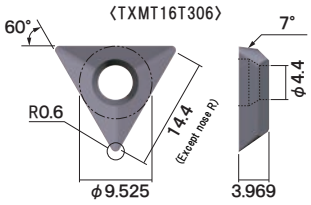
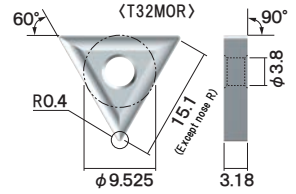
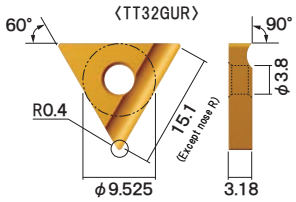
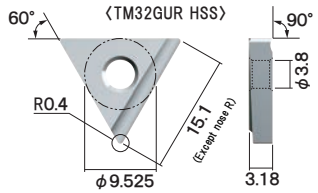
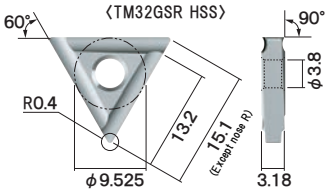
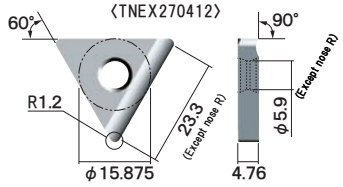
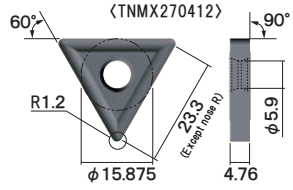
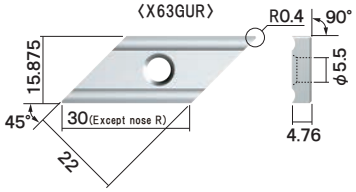
Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
●Momimen Nano 	ENGX040102 AC15N	Fine particles Carbide	Honing edge	AlCrN	2	12
●Chibimomi 	C22GUX NK1010	Carbide K10	Sharp edge	None	2	12
	C22GUX NK2020	Carbide M20	Honing edge	None	2	12
	C22GUX NK3030	Carbide M20	Honing edge	TiN	2	12
	C22GUX NK5050	Carbide K10	Sharp edge	TiN	2	12
	C22GUX NK6060	Carbide M20	Honing edge	TiAlN	2	12
	C22GUX NK8080	Carbide K10	Sharp edge	TiAlN	2	12
●Momimen 	C32GUX NK2001	Cermet	Honing edge	None	2	12
	C32GUX NK1010	Carbide K10	Sharp edge	None	2	12
	C32GUX NK2020	Carbide M20	Honing edge	None	2	12
	C32GUX NK3030	Carbide M20	Honing edge	TiN	2	12
	C32GUX NK5050	Carbide K10	Sharp edge	TiN	2	12
	C32GUX NK6060	Carbide M20	Honing edge	TiAlN	2	12
	C32GUX NK8080	Carbide K10	Sharp edge	TiAlN	2	12
	C32GUX AC15D	Fine particles Carbide	Honing edge	AlCrN	2	12
	NEW C32GUX AC25D	Fine particles Carbide	Sharp edge	AlCrN	2	12
	C32GUX HSS	HSS	Honing edge	None	2	12
	C32GUX HSS TiN	HSS	Sharp edge	TiN	2	12
●Dekamomi 	T32GUX NK2001	Cermet	Honing edge	None	2	12
	T32GUX NK1010	Carbide K10	Sharp edge	None	2	12
	T32GUX NK2020	Carbide M20	Honing edge	None	2	12
	T32GUX NK3030	Carbide M20	Honing edge	TiN	2	12
	T32GUX NK5050	Carbide K10	Sharp edge	TiN	2	12
	T32GUX NK6060	Carbide M20	Honing edge	TiAlN	2	12
	T32GUX NK8080	Carbide K10	Sharp edge	TiAlN	2	12
	T32GUX HSS	HSS	Honing edge	None	2	12
	T32GUX HSS TiN	HSS	Sharp edge	TiN	2	12
●60° Momimen 	D43GUX NK1010	Carbide K10	Sharp edge	None	2	12
	D43GUX NK5050	Carbide K10	Sharp edge	TiN	2	12
	D43GUX NK8080	Carbide K10	Sharp edge	TiAlN	2	12
●60° Momimen (SC1660DS) 	DCET11X304 ZA10N	Carbide K10	Sharp edge	None	2	12
	DCET11X304 AC15N	Fine particles Carbide	Honing edge	AlCrN	2	12
●Chibieco /Chibieco2 	TXMT080206 ZA10N	Carbide K10	Sharp edge	None	3	12
	TXMT080206 AC15N	Fine particles Carbide	Honing edge	AlCrN	3	12
●Momieco/Momieco2 	TXMT110306 ZA10N	Carbide K10	Sharp edge	None	3	12
	TXMT110306 AC15N	Fine particles Carbide	Honing edge	AlCrN	3	12

Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
● Ecomen/Ecomen2/Choumen 	TXMT16T306 ZA10N	Carbide K10	Sharp edge	None	3	12
	TXMT16T306 AC15N	Fine particles Carbide	Honing edge	AlCrN	3	12
● Chamfering Cutter/RCindo-Cutter Baitender 	T32MOR NK2001	Cermet	Honing edge	None	6	12
	T32MOR NK1010	Carbide K10	Sharp edge	None	6	12
	T32MOR NK2020	Carbide M20	Honing edge	None	6	12
	T32MOR NK3030	Carbide M20	Honing edge	TiN	6	12
	T32MOR NK6060	Carbide M20	Honing edge	TiAℓN	6	12
● Chamfering Cutter/RCindo-Cutter Baitender 	TT32GUR NK2001	Cermet	Honing edge	None	2	12
	TT32GUR NK1010	Carbide K10	Sharp edge	None	2	12
	TT32GUR NK2020	Carbide M20	Honing edge	None	2	12
	TT32GUR NK3030	Carbide M20	Honing edge	TiN	2	12
	TT32GUR NK5050	Carbide K10	Sharp edge	TiN	2	12
	TT32GUR NK6060	Carbide M20	Honing edge	TiAℓN	2	12
	TT32GUR NK8080	Carbide K10	Sharp edge	TiAℓN	2	12
	TT32GUR AC15N	Fine particles Carbide	Honing edge	AlCrN	2	12
	TT32GUR HSS	HSS	Sharp edge	None	2	12
	TT32GUR HSS TiN	HSS	Sharp edge	TiN	2	12
● Mentrube 	TM32GUR HSS	HSS	Sharp edge	None	2	3
	TM32GUR HSS TiAℓN	HSS	Sharp edge	TiAℓN	2	3
● Mentrube 	TM32GSR HSS	HSS	Sharp edge	None	6	3
	TM32GUR HSS TiAℓN	HSS	Sharp edge	TiAℓN	6	3
● Youngmen 	TNEX270412 ZA10T	Carbide K10	Sharp edge	None	2	3
● Youngmen 	TNMX270412 AA20T	Carbide M20	Honing edge	AlCrN	6	3
	TNMX270412 AC15N	Fine particles Carbide	Honing edge	AlCrN	6	3
● Gentlemen 	X63GUR NK1010	Carbide K10	Sharp edge	None	2	3
	X63GUR NK2020	Carbide M20	Honing edge	None	2	3
	X63GUR NK6060	Carbide M20	Honing edge	TiAℓN	2	3
	X63GUR AC15N	Fine particles Carbide	Honing edge	AlCrN	2	3

Inserts

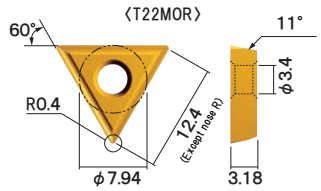
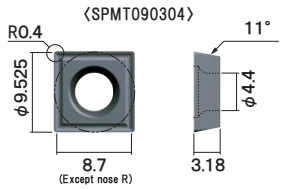
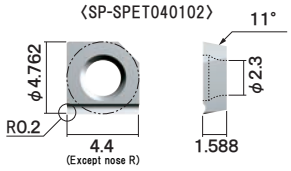
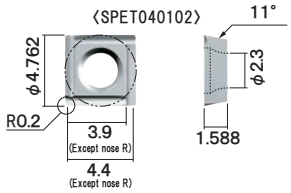
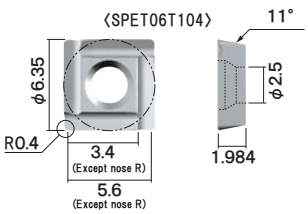
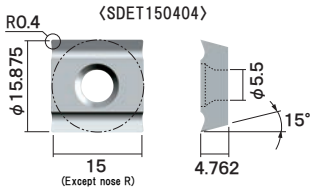
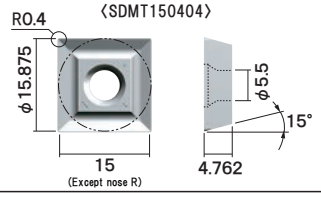
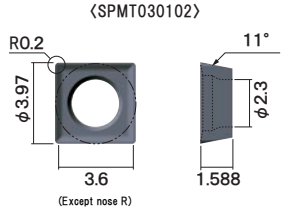
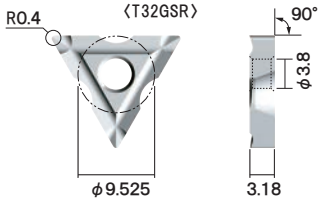
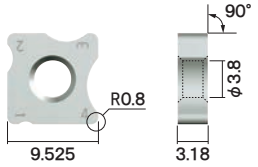
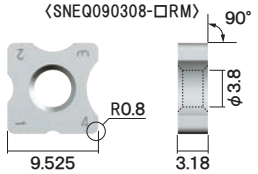
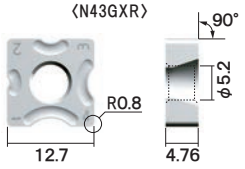
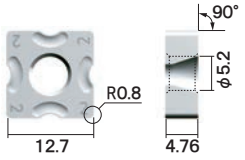
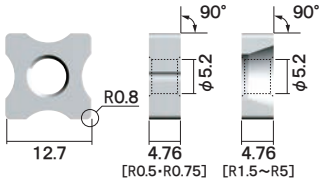
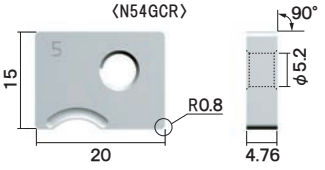
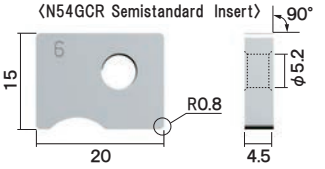
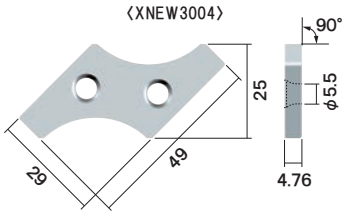
Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
●Ryanmencut-V 	T22MOR NK5050	Carbide K10		TiN	3	12
●Ryanmencut-V 	SPMT090304 NK6060	Carbide M20		TiAℓN	4	12
●Uratorimen-C(M8) 	SP-SPET040102 NK1010	Carbide K10	Sharp edge	None	1	12
	SP-SPET040102 NK2020	Carbide M20	Honing edge	None	1	12
	SP-SPET040102 NK6060	Carbide M20	Honing edge	TiAℓN	1	12
●Uratorimen-C(M10) 	SPET040102 NK1010	Carbide K10	Sharp edge	None	4	12
	SPET040102 NK2020	Carbide M20	Honing edge	None	4	12
	SPET040102 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
●Uratorimen-C(M12～18/UM12-16S) 	SPET06T104 NK1010	Carbide K10	Sharp edge	None	4	12
	SPET06T104 NK2020	Carbide M20	Honing edge	None	4	12
	SPET06T104 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
●Multi-Angle mill 	SDET150404 ZA10N	Carbide K10	Sharp edge	None	2	3
●Multi-Angle mill 	SDMT150404 ZA20N	Carbide M20	Honing edge	None	4	3
	SDMT150404 DA20N	Carbide M20	Honing edge	TiAℓN	4	3
	SDMT150404 AC15N	Fine particles Carbide	Honing edge	AlCrN	4	3
●Chibi Ryanmen 	SPMT030102 ZA20N	Carbide M20		None	4	12
	SPMT030102 AA20N	Carbide M20		AlCrN	4	12

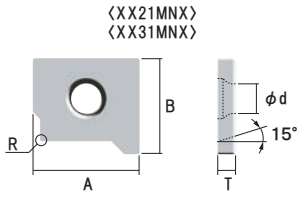
Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
● RCindo-Cutter 	T32GSR-1R NK2020	Carbide M20		None	3	3
	T32GSR-2R NK2020	Carbide M20		None	3	3
	T32GSR-3R NK2020	Carbide M20		None	3	3
● Han-Chan-man R/Nice-Corner FR 〈SNEQ090308-□RY〉 	SNEQ090308-1RY ZA20N	Carbide M20	The Same R Each corner	None	4	12
	SNEQ090308-2RY ZA20N	Carbide M20	The Same R Each corner	None	4	12
	SNEQ090308-3RY ZA20N	Carbide M20	The Same R Each corner	None	4	12
	SNEQ090308-XRY ZA20N	Carbide M20	R1・2・3・4	None	4	12
● Ryanmencut-R(RR16-30S・RR25-40S) Mini-R/Nice-Corner FR 〈SNEQ090308-□RM〉 	SNEQ090308-1RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-2RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-3RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-4RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-5RM ZA20N	Carbide M20	The Same R Each corner	None	8	12
	SNEQ090308-XRM ZA20N	Carbide M20	The Same R Each corner	None	8	12
● R-Special/R-Special Jr./R-Bit Ryanmencut-R(RR25-48N) Nice-Corner VR/Han-Chan-manR-HYPER 〈N43GXR〉   〈N43GXR Semistandard Insert〉  ※ R bytes, I can use to R0.5 ~ R3.5. ※ For the Semi-Standard Insert, breaker does not contain.	N43GXR NK2001	Cermet	R1・2・3・4	None	4	3/12
	N43GXR NK1010	Carbide K10	R1・2・3・4	None	4	3/12
	N43GXR NK2020	Carbide M20	R1・2・3・4	None	4	3/12
	N43GXR NK6060	Carbide M20	R1・2・3・4	TiAℓN	4	3/12
	N43GXR-1R NK2001	Cermet	The Same R Each corner	None	4	3/12
	N43GXR-2R NK2001	Cermet	The Same R Each corner	None	4	3/12
	N43GXR-3R NK2001	Cermet	The Same R Each corner	None	4	3/12
	N43GXR-4R NK2001	Cermet	The Same R Each corner	None	4	3/12
	N43GXR-1R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	N43GXR-2R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	N43GXR-3R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	N43GXR-4R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
	N43GXR-1R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
	N43GXR-2R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
	N43GXR-3R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
	N43GXR-4R NK6060	Carbide M20	The Same R Each corner	TiAℓN	4	3/12
Semi Standard	N43GXR-0.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
Semi Standard	N43GXR-0.75R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
Semi Standard	N43GXR-1.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
Semi Standard	N43GXR-2.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
Semi Standard	N43GXR-3.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
Semi Standard	N43GXR-4.5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
Semi Standard	N43GXR-5R NK2020	Carbide M20	The Same R Each corner	None	4	3/12
● R-Nouveau/R-Nouveau Jr./10R-bit 〈N54GCR〉  〈N54GCR Semistandard Insert〉  ※ For the Semistandard Insert, breaker does not contain.	N54GCR-5R NK2020	Carbide M20		None	1	3
	N54GCR-8R NK2020	Carbide M20		None	1	3
	N54GCR-10R NK2020	Carbide M20		None	1	3
	N54GCR-5R NK6060	Carbide M20		TiAℓN	1	3
	N54GCR-8R NK6060	Carbide M20		TiAℓN	1	3
	N54GCR-10R NK6060	Carbide M20		TiAℓN	1	3
Semi-standard	N54GCR-6R NK2020	Carbide M20		None	1	3
Semi-standard	N54GCR-7R NK2020	Carbide M20		None	1	3
Semi-standard	N54GCR-9R NK2020	Carbide M20		None	1	3

Inserts

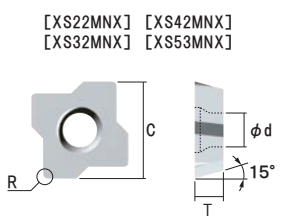
Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
● R-Giga	XNEW3004-11R NK2020	Carbide M20	Honing edge	None	2	3
	XNEW3004-12R NK2020	Carbide M20	Honing edge	None	2	3
	XNEW3004-13R NK2020	Carbide M20	Honing edge	None	2	3
	XNEW3004-14R NK2020	Carbide M20	Honing edge	None	2	3
	XNEW3004-15R NK2020	Carbide M20	Honing edge	None	2	3
	XNEW3004-16R NK2020	Carbide M20	Honing edge	None	2	3
	XNEW3004-17R NK2020	Carbide M20	Honing edge	None	2	3
	XNEW3004-18R NK2020	Carbide M20	Honing edge	None	2	3
	XNEW3004-19R NK2020	Carbide M20	Honing edge	None	2	3
	XNEW3004-20R NK2020	Carbide M20	Honing edge	None	2	3
● Eaglecut(M4～M6)	XX21MNX-M4 NK2020	Carbide M20	Honing edge	None	1	12
	XX21MNX-M5 NK2020	Carbide M20	Honing edge	None	1	12
	XX31MNX-M6 NK2020	Carbide M20	Honing edge	None	1	12
	XX21MNX-M4 NK6060	Carbide M20	Honing edge	TiAℓN	1	12
	XX21MNX-M5 NK6060	Carbide M20	Honing edge	TiAℓN	1	12
	XX31MNX-M6 NK6060	Carbide M20	Honing edge	TiAℓN	1	12
● Eaglecut(M4～M6) Birdiecut	XS22MNX-M8 NK2020	Carbide M20	Honing edge	None	4	12
	XS22MNX-M10 NK2020	Carbide M20	Honing edge	None	4	12
	XS22MNX-M12 NK2020	Carbide M20	Honing edge	None	4	12
	XS32MNX-M14 NK2020	Carbide M20	Honing edge	None	4	12
	XS32MNX-M16 NK2020	Carbide M20	Honing edge	None	4	12
	XS42MNX-M18 NK2020	Carbide M20	Honing edge	None	4	12
	XS42MNX-M20 NK2020	Carbide M20	Honing edge	None	4	12
	XS42MNX-M22 NK2020	Carbide M20	Honing edge	None	4	12
	XS53MNX-M24 NK2020	Carbide M20	Honing edge	None	4	12
	XS53MNX-M27 NK2020	Carbide M20	Honing edge	None	4	12
	XS53MNX-M30 NK2020	Carbide M20	Honing edge	None	4	12
	XS22MNX-M8 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	XS22MNX-M10 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	XS22MNX-M12 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	XS32MNX-M14 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	XS32MNX-M16 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	XS42MNX-M18 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	XS42MNX-M20 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	XS42MNX-M22 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	XS53MNX-M24 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	XS53MNX-M27 NK6060	Carbide M20	Honing edge	TiAℓN	4	12
	XS53MNX-M30 NK6060	Carbide M20	Honing edge	TiAℓN	4	12



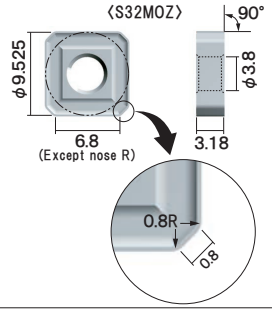
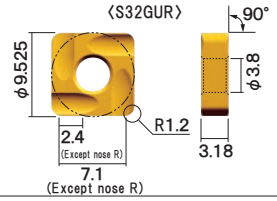
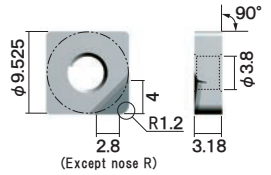
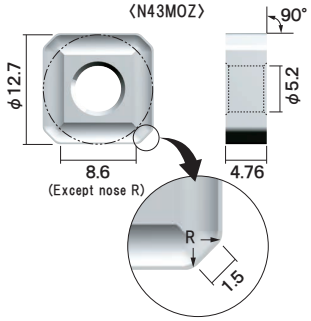
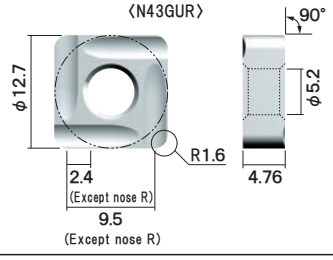
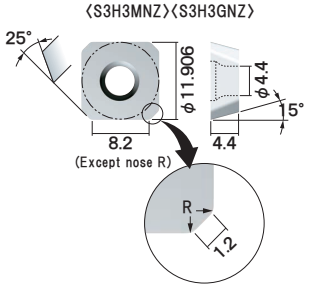
Order production



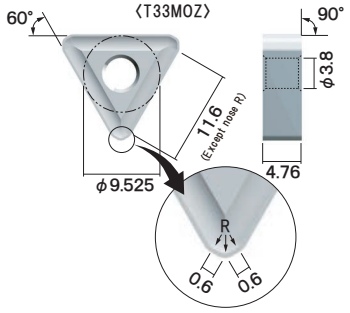
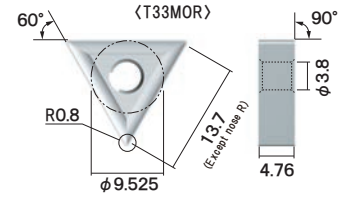
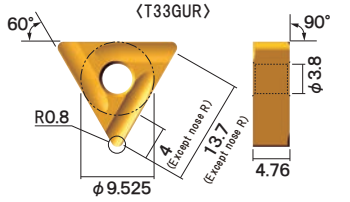
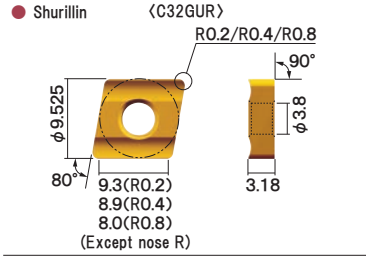
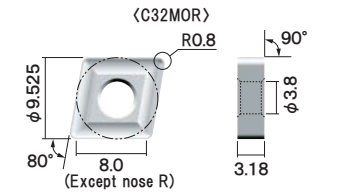
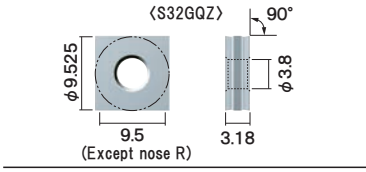
型　番	A	B	T	R	φd
XX21MNX-M4	8mm	6.548mm	1.59mm	R0.2	2.3mm
XX21MNX-M5	8mm	6.841mm	1.59mm	R0.2	2.3mm
XX31MNX-M6	9mm	8.084mm	1.59mm	R0.2	2.5mm



型　番	C	T	R	φd
XS22MNX-M8	6.35mm	2.38mm	R0.4	2.5mm
XS22MNX-M10	7.938mm	2.38mm	R0.4	3.4mm
XS22MNX-M12	7.938mm	2.38mm	R0.4	3.4mm
XS32MNX-M14	9.525mm	3.18mm	R0.8	4.4mm
XS32MNX-M16	9.525mm	3.18mm	R0.8	4.4mm
XS42MNX-M18	12.7mm	3.18mm	R0.8	5.5mm
XS42MNX-M20	12.7mm	3.18mm	R0.8	5.5mm
XS42MNX-M22	12.7mm	3.18mm	R0.8	5.5mm
XS53MNX-M24	15.875mm	4.76mm	R0.8	5.5mm
XS53MNX-M27	15.875mm	4.76mm	R0.8	5.5mm
XS53MNX-M30	15.875mm	4.76mm	R0.8	5.5mm

Fig.	Model.No.	Material	Blade Shape	Coating	Use Corner Number	Number 1 Case Input
●S-Type/Aeromill(negative) Nice-Corner V3/Nice-Corner F3 Han-Chan-man/Ryanmencut-R Han-Chan-man R/New Nice Cut Nice-Corner FR 〈S32MOZ〉  	S32MOZ NK2001	Cermet	Honing edge	None	8	12
	S32MOZ NK2050	Cermet	Honing edge	None	8	12
	NEW S32MOZ AB01F	Cermet	Honing edge	AlCrN	8	12
	S32MOZ NK1010	Carbide K10	Sharp edge	None	8	12
	S32MOZ NK2020	Carbide M20	Honing edge	None	8	12
	S32MOZ NK3030	Carbide M20	Honing edge	TiN	8	12
	S32MOZ NK6060	Carbide M20	Honing edge	TiAlN	8	12
	S32MOZ AC15T	Fine particles Carbide	Honing edge	AlCrN	8	12
〈S32GUR〉  	S32GUR NK2001	Cermet	Honing edge	None	8	12
	S32GUR NK1010	Carbide K10	Sharp edge	None	8	12
	S32GUR NK2020	Carbide M20	Honing edge	None	8	12
	S32GUR NK3030	Carbide M20	Honing edge	TiN	8	12
	S32GUR NK5050	Carbide K10	Sharp edge	TiN	8	12
	S32GUR NK6060	Carbide M20	Honing edge	TiAlN	8	12
	S32GUR NK8080	Carbide K10	Sharp edge	TiAlN	8	12
〈S32GUR DIA〉  	S32GUR DIA	Sintering diamond	Sharp edge	None	1	1
●N-type/Han-Chan-manR-HYPER 〈N43MOZ〉  	N43MOZ NK2001	Cermet	Honing edge	None	8	12
	N43MOZ NK1010	Carbide K10	Sharp edge	None	8	12
	N43MOZ NK2020	Carbide M20	Honing edge	None	8	12
	N43MOZ NK3030	Carbide M20	Honing edge	TiN	8	12
	N43MOZ NK6060	Carbide M20	Honing edge	TiAlN	8	12
〈N43GUR〉  	N43GUR NK2001	Cermet	Honing edge	None	8	12
	N43GUR NK1010	Carbide K10	Sharp edge	None	8	12
	N43GUR NK2020	Carbide M20	Honing edge	None	8	12
	N43GUR NK3030	Carbide M20	Honing edge	TiN	8	12
	N43GUR NK6060	Carbide M20	Honing edge	TiAlN	8	12
	N43GUR NK8080	Carbide K10	Sharp edge	TiAlN	8	12
●Aeromill(positive)/Kame Cutter New Nice Cut/Nice-Corner F3 〈S3H3MNZ〉〈S3H3GNZ〉  	S3H3MNZ NK2001	Cermet	Honing edge	None	4	12
	S3H3GNZ NK1010	Carbide K10	Sharp edge	None	4	12
	S3H3MNZ NK2020	Carbide M20	Honing edge	None	4	12
	S3H3MNZ NK6060	Carbide M20	Honing edge	TiAlN	4	12
	S3H3GNZ NK9090	Carbide K10	Sharp edge	None	4	12
	S3H3MNZ AC15D	Fine particles Carbide	Honing edge	AlCrN	4	12

Insert

Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
● T-Type 	T33MOZ NK2001	Cermet	Honing edge	None	6	12
	T33MOZ NK1010	Carbide K10	Sharp edge	None	6	12
	T33MOZ NK2020	Carbide M20	Honing edge	None	6	12
	T33MOZ NK3030	Carbide M20	Honing edge	TiN	6	12
	T33MOZ NK6060	Carbide M20	Honing edge	TiAℓN	6	12
	T33MOR NK2001	Cermet	Honing edge	None	6	12
	T33MOR NK1010	Carbide K10	Sharp edge	None	6	12
	T33MOR NK2020	Carbide M20	Honing edge	None	6	12
	T33MOR NK3030	Carbide M20	Honing edge	TiN	6	12
	T33MOR NK6060	Carbide M20	Honing edge	TiAℓN	6	12
	T33GUR NK2001	Cermet	Honing edge	None	6	12
	T33GUR NK1010	Carbide K10	Sharp edge	None	6	12
	T33GUR NK2020	Carbide M20	Honing edge	None	6	12
	T33GUR NK3030	Carbide M20	Honing edge	TiN	6	12
	T33GUR NK5050	Carbide K10	Sharp edge	TiN	6	12
	T33GUR NK6060	Carbide M20	Honing edge	TiAℓN	6	12
	T33GUR NK8080	Carbide K10	Sharp edge	TiAℓN	6	12
● Shurillin 	C32GUR-0.2R NK2020	Carbide M20	Honing edge	None	4	12
	C32GUR-0.4R NK2020	Carbide M20	Honing edge	None	4	12
	C32GUR-0.8R NK2020	Carbide M20	Honing edge	None	4	12
	C32GUR-0.2R NK1010	Carbide K10	Sharp edge	None	4	12
	C32GUR-0.2R NK3030	Carbide M20	Honing edge	TiN	4	12
	C32GUR-0.4R NK3030	Carbide M20	Honing edge	TiN	4	12
	C32GUR-0.8R NK3030	Carbide M20	Honing edge	TiN	4	12
● Shurillin 	C32MOR-0.8R ZB01H	Cermet	Honing edge	None	4	12
● Nice-Corner V2 	S32GQZ NK2001	Carbide K10		None	16	12
	S32GQZ NK2020	Carbide M20		None	16	12
	S32GQZ NK6060	Carbide M20		TiAℓN	16	12

⚠ S32GUR (diamond except), N43GUR, the length of the straight portion of T33GUR is,It becomes a thick line part.

Example) T33GUR

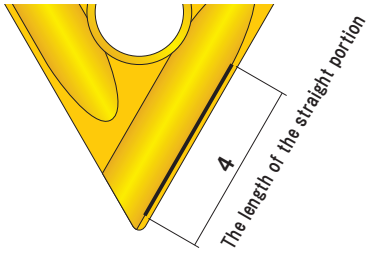
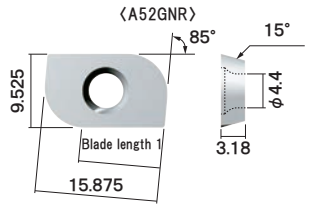
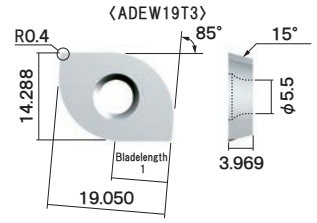
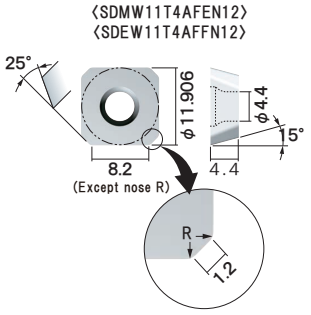
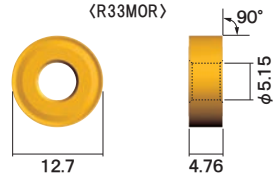
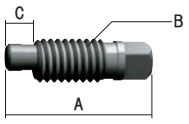
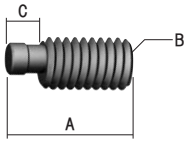
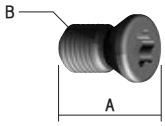
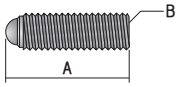


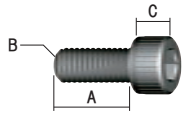
Fig.	Model.No.	Material	Blade Shape	Coating	Usable corner	Quantity per box
● Sumicco/Sumicco R-Bit 〈A52GNR〉  ※ I stocks for each R0.5. ■ Blade length (Except nose R) Insert / Blade length 1 0.5R 15mm 1R 14.4mm 1.5R 13.9mm 2R 13.3mm 2.5R 12.8mm 3R 12.2mm 3.5R 11.7mm 4R 11.1mm 4.5R 10.5mm 5R 10mm	A52GNR-0.5R NK1010 A52GNR-1R NK1010 A52GNR-1.5R NK1010 A52GNR-2R NK1010 A52GNR-2.5R NK1010 A52GNR-3R NK1010 A52GNR-3.5R NK1010 A52GNR-4R NK1010 A52GNR-4.5R NK1010 A52GNR-5R NK1010	Carbide K10	Sharp edge	None	2	12
	A52GNR-0.5R NK2020 A52GNR-1R NK2020 A52GNR-1.5R NK2020 A52GNR-2R NK2020 A52GNR-2.5R NK2020 A52GNR-3R NK2020 A52GNR-3.5R NK2020 A52GNR-4R NK2020 A52GNR-4.5R NK2020 A52GNR-5R NK2020	Carbide M20	Honing edge	None	2	12
● Dekasumi/Dekasumi R-Bit 〈ADEW19T3〉  ※ I stocks for each R1 ■ Blade length (Except nose R) Insert / Blade length 1 5R 13.2mm 6R 12mm 7R 11mm 8R 9.8mm 9R 8.7mm 10R 7.7mm	ADEW19T3-5R NK1010 ADEW19T3-6R NK1010 ADEW19T3-7R NK1010 ADEW19T3-8R NK1010 ADEW19T3-9R NK1010 ADEW19T3-10R NK1010	Carbide K10	Sharp edge	None	2	4
	ADEW19T3-5R NK2020 ADEW19T3-6R NK2020 ADEW19T3-7R NK2020 ADEW19T3-8R NK2020 ADEW19T3-9R NK2020 ADEW19T3-10R NK2020	Carbide M20	Honing edge	None	2	4
	ADEW19T3-5R NK6060 ADEW19T3-6R NK6060 ADEW19T3-7R NK6060 ADEW19T3-8R NK6060 ADEW19T3-9R NK6060 ADEW19T3-10R NK6060	Carbide M20	Honing edge	TiAlN	2	4
● Han-Chan-man 〈SDMW11T4AFEN12〉 〈SDEW11T4AFFN12〉  	SDMW11T4AFEN12 ZB01N	Cermet	Honing edge	None	4	10
	SDEW11T4AFFN12 ZA10D	Carbide K10	Sharp edge	None	4	10
	SDMW11T4AFEN12 ZA20D	Carbide M20	Honing edge	None	4	10
	SDEW11T4AFFN12 ZA10DL	Carbide K10	Sharp edge	None	4	10
	SDMW11T4AFEN12 AC15D	Fine particles Carbide	Honing edge	AlCrN	4	10
● Maru-chan 〈R33MOR〉  	R33MOR NK2001	Cermet	Honing edge	None	360° both sides	12
	R33MOR NK1010	Carbide K10	Sharp edge	None	360° both sides	12
	R33MOR NK5050	Carbide K10	Sharp edge	TiN	360° both sides	12

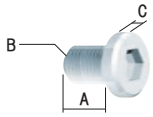
Spare Parts List

Lock pin	Model No.	A	B	C	Winding direction	Wrench	Fit body
	L-1	20	M6×1	4	R	NL-4	NK4560S / Nice-CornerV2 / Nice-CornerV3
	L-2	24	M8×1	5.5	R	NL-4	NK4536N / Nice-CornerVR
	L-4	27	M8×1	5.5	R	NL-4	NK4560N
	L-9	22	M6×1	4	R	NL-4	NK Face Mill B / FK Face Mill B / NK6.Face Mill / BK8.Deka-Cutter BK12.Deka-Cutter / KK6.Karu-Cutter / KK8.Karu-Cutter
	L-5	14	M6×1	5.5	L	K-3	Skat Cut / New Nice Cut
※ L-3・L-8 I was changed to L-5.	L-6	9.5	M6×0.75	3.5	R	K-3	Momimen / Chanmferring Cutter / RCindo-Cutter Aeromill(negative S Type) /Baitender
	L-10	14	M6×0.75	3.5	R	K-3	Dekamomi
	L-11	16.5	M8×1	5.5	L	K-4	Maru-chan
	L-12	16.5	M8×1	5.5	R	K-4	Baitender
	L-14	13	M8×1	5.5	R	K-4	R-Special Jr. / Ryanmencut・R(RR25-48N)
	L-17	13	M8×1	5.5	L	K-4	Maru-chan
	L-21	14	M6×1	4	L	K-3	New Nice Cut / New Tiko Cutter / Han-Chan-man / Nice-Corner F3
	L-23	13	M8×1	5	R	TL-64	Han-Chan-man R-HYPER

Clamp Screw	Model No.	A	B	C	Winding direction	Wrench	Fit body
	L-13	4.8	M2.5×0.45		R	N-5	Chibimomi / Momieco / Momieco2
	L-15	6.5	M4×0.7		R	N-6 / N-7	60° Momimen / Sumicco R-Bit / Eaglecut(M14・M16) Birdiecut(M14・M16)/Aeromill(positive S type))/ Sumicco / Nice-Corner F3 New Nice Cut / Han-Chan-man / Kame Cutter / Ecomen / Ecomen2 / Choumen
	L-16	9.5	M5×0.8		R	BT-20	Youngmen / Gentlemen / R-Giga / Dekasumi R-Bit Eaglecut(M18～M30)/ Birdiecut(M18～M30) Dekasumi / Multi-Angle mill
	L-18	3.3	M2×0.4		R	N-4	Momimen nano / Uratorimen-C(M8～M10) Eaglecut(M4・M5) / Chibieco / Chibieco2 / Chibi Ryanmen
	L-19	4.5	M2.2×0.45		R	N-4	Uratorimen-C(M12～M18・UM12-16S) / Eaglecut(M6・M8) Birdiecut(M8)
	L-20	12	M4×0.7		R	N-6	New Nice Cut
Cap Screw(M6×15) CP6-15	M-1	8	M3×0.5		R	MA-1	Mentrube / Ryanmencut-V / Eaglecut(M10・M12) Birdiecut(M10・M12) / Shurillin / Multi-Angle mill / Men men Ryanmencut-R(RR16-30S・RR25-40S) / Mini-R / Han-Chan-man R

With ball screw	Model No.	A	B	C	Winding direction	Wrench	Fit body
	B-1	18	M6×1		R	K-3	NK Face Mill / FK Face Mill
	B-2	21	M8×1.25		R	K-4	NK Face Mill B / FK Face Mill B / NK6.Face Mill / BK8.Deka-Cutter BK12.Deka-Cutter / KK6.Karu-Cutter / KK8.Karu-Cutter
	B-1s	12.5	M6×1		R	K-3	Tiko Cutter / KK3.Karu-Cutter / KK5.Karu-Cutter

Cap Screw	Model No.	A	B	C	Winding direction	Wrench	Fit body
	CP6-15	15	M6	6	R	K-5	New Nice Cut

Resin guide plate screws	Model No.	A	B	C	Winding direction	Wrench	Fit body
	H-1	8	M5×0.8	1.5	R	K-3	Han-Chan-man

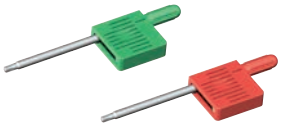
Clamp piece	Model No.	Dimensions (mm)	Wrench	Fit body
	CL-1S		K-3	R-Nouveau Jr. / R-Nouveau / R-SpecialJr. / 10R-Bit Skat Cut / Multi-Angle mill

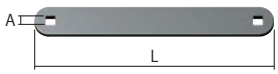
Locator	Model No.	Dimensions (mm)	Wrench	Fit body
	ML-S15			Multi-Angle mill

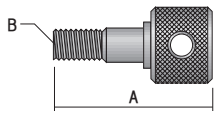
Locator received	Model No.	Dimensions (mm)	Wrench	Fit body
	MLH-1			Multi-Angle mill

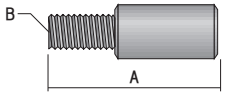
Set screw	Model No.	Dimensions (mm)		Wrench	Fit body
		Set screw1	Set screw2		
	KH-1S	M6×8	M6×10	K-3	Oilsshar
	KH-2S	M8×6	M8×6	K-4	
	KH-3S	M8×8	M8×8	K-4	
	KH-4S	M8×10	M8×8	K-4	
	KH-5S	M10×8	M10×8	K-5	
	KH-6S	M10×8	M10×10	K-5	

Set screw	Model No.	Shape	Dimensions(mm)	Wrench	Fit body
	BH-1		M8×10	K-4	Baitender

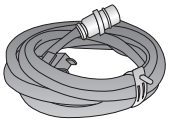
Wrench	Model No.	Shape	Dimensions(mm)	Wrench	Fit body
	K-2	Hexagonal	2		Choi-Pro
	K-3	Hexagonal	3		Momimen / Dekamomi / Chanmferring Cutter / RCindo-Cutter R-Nouveau Jr. / R-Nouveau / 10R-Bit / Aeromill(negative S Type) Skat Cut / Multi-Angle mill / New Tiko Cutter Nice-Corner F3 / Oilsshar / Baitender / Han-Chan-man R-HYPER / Choi-Pro
	K-4	Hexagonal	4		R-NouveauJr. / R-SpecialJr. / R-Special / R-Nouveau / R-Bit / 10R-Bit Han-Chan-man / Nice-CornerF3 / Oilsshar/Ryanmencut-R(RR25-48N)
	K-5	Hexagonal	5		New Nice Cut / Han-Chan-man / Oilsshar / Han-Chan-manR
	K-6	Hexagonal	6		Nice-Corner V2 / Nice-Corner V3 / Nice-Corner VR
	TL-64	Hexagonal	4		Han-Chan-man R-HYPER
	N-4	T-6			Momimen nano / Uratorimen-C / Eaglecut(M4～M8) Birdiecut(M8) / Chibieco / Chibieco2 / Chibi Ryanmen
	N-5	T-8			Chibimomi / Momieco / Momieco2
	N-7	T-15			Eaglecut(M14・M16) / Birdiecut(M14・M16) Ecomen / Ecomen2 / Choumen
	MA-1	T-9			Mentrube / Ryanmencut-V / Eaglecut(M10・M12) Birdiecut(M10・M12) / Shurillin / Multi-Angle mill / Men men Ryanmencut-R(RR16-30S・RR25-40S) / Mini-R
	BT-20	T-20			Youngmen / Gentlemen / R-Giga / Dekasumi R-Bit Eaglecut(M18～M30)/ Birdiecut(M18～M30) Dekasumi / Multi-Angle mill
	N-6	T-15			60° Momimen / Sumicco R-Bit /Aeromill(positive S type) Sumicco New Nice Cut / Han-Chan-man / Kame Cutter
	TN-L6	T-15			Nice-Corner F3
	TL-T9	T-9			Han-Chan-man R / Nice-Corner FR

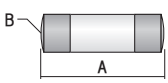
Spanner	Model No.	A	Dimensions(mm)		Fit body
	NL-4	4mm	90		NK4560S / NK4536N /NK4560N NK Face Mill B /FK Face Mill B / NK6.Face Mill / BK8.Deka-Cutter BK12.Deka-Cutter / KK6.Karu-Cutter / KK8.Karu-Cutter Nice-Corner V2 / Nice-Corner V3 / Nice-Corner VR

V2 / VR for the guide plate fixing bolts	Model No.	A	B		Fit body
	GFB-1	66mm	M8		Nice-Corner VR
	GFB-2	48mm	M8		Nice-Corner V2

V2 for round bar machining set bolt	Model No.	A	B		Fit body
	RBB-1	30mm	M6		Nice-Corner V2

V2 cutter fixing handle	Model No.	A	B		Fit body
	CHF-1	100mm	5.8mm		Nice-Corner V2

Power cord	Model No.	Dimensions(mm)	Fit body
	PC-1	3m	Nice-Corner V2 / Nice-Corner V3 / Nice-Corner VR / Nice-Corner F3 / Nice-Corner FR
	PC-0	1.8m	Choi-Pro

Fuses/15A	Model No.	A	B	electric current	Fit body
	F-15A	19mm	φ5mm	15A	Nice-Corner V2 / Nice-Corner V3 / Nice-Corner VR / Nice-Corner F3 / Nice-Corner FR
	F-10A	20mm	φ5mm	10A	Choi-Pro

Trouble Shooting

Series	Type of Trouble	Problem	Problem Origin/Solution(s)
C c h a m f e r i n g / R c h a m f e r i n g / F a i t h s h o u l d e r	Leaving secondary burrs	Feed rate is too high	●Increase rotation ● Decrease the feed rate
		Poor process by edge wearing	Change corner of insert edge
		Aluminum/Stainless Steel process with honing insert	Change to sharp edge type insert
		Aluminum/Stainless Steel process with MOR・MOZ type insert	Change to GUR type insert
		Cutting heat with dry cutting	Use cutting oil
	Chipping of Insert	Reverse mounting of eccentricity locking system tools	Correct direction when mounting
		No Screw for holding Insert	Mount clamp screw for clamp screw type cutters
		Poor cutting edge with GUR Insert	Change it to MOR type Insert
		Low rotation (Chipping of edge of corner)	Increase the rotation rate
		Low insert rigidity	● NK2050→NK2001→NK6060→NK3030→ NK2020→AC15→HSS ● NK8080→NK5050→NK1010→HSS
	Excssive insert wear	Lower hardness of insert	Reverse above
		Hardness wear due to high heat generation on insert edge	● Increase rotation rate ● Change coolant supply or increase oil volume ● Use Cermet coating insert
		Crushing of the insert edge on Stainless Steel processing	Increase the rotation rate
	Chattering	Cutting condition is too high	Decrease the rotation rate or the feed rate
		Extension of tool is large	Minimize extension of tool
		Point shape is inappropriate	● sharp edge → honing edge ● honing edge → sharp edge
		Using MOR type Insert	Use GUR type Insert
	Bad surface finish	Poor accuracy on cuting edge	Repairing or adjustment of accuracy
		Honing Edge (Aluminum)	Use Sharp edge type insert
		Using MOR/MOZ type Insert	Use GUR type Insert
		Dry Cutting (high heat generation)	Use coolant
	Poor process accuracy	Reverse clamping(mounting)	Correct clamping direction
	Poor process accuracy (R Chamfering)	Reverse Insert mounting	Correct mounting direction
		Reverse Insert position(front or back)	Correct Insert clamp position
		Programing Error	Confirm numerically-control
	Plucking workpiece Poor surface finish (Aluminum)	Dry cutting (high heat generation)	Change to Wet cutting (coolant)
		Honing edge insert(Aluminum)	Use sharp edge type insert
	Insert mount trouble Insert is flying	Poor clamping on lock pin wear	Exchange to new lock pin
		Poor accuracy clamp position	Mount Lock pin position correctly
Portable Chamfering Machine	Poor thin material process	Take guide clearance in large	Change the guide for thin material use
	Poor processing by using slide guide	Cannot standardize surface process by using slide guide	Adjustment and repairing

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http://www.nicecut.co.jp/

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